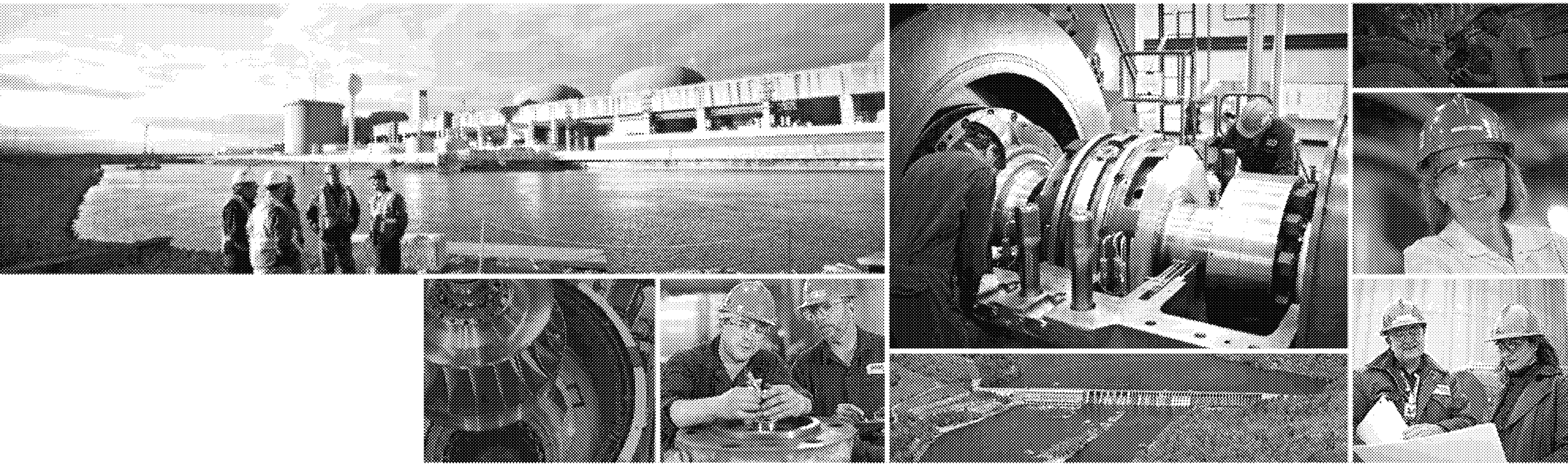
# Ontario Power Generation
## Global Adjustment Re-financing Briefing for New Directors

Thursday, March 30, 2017
12:00 p.m. – 2:00 p.m.
Conference Room #2 - 19th Floor, 700 University Avenue, Toronto, Ontario

| | | |
|---|---|---|
| 1. | **Welcome and Introductions** | Jeff Lyash<br>Catriona King |
| 2. | **Ontario Electricity Context** | Carlo Crozzoli |
| 3. | **Mandate of the Special Committee** | Ken Hartwick |
| 4. | **Governance Considerations** | Chris Ginther |
| 5. | **GA Re-financing Workplan** | Ken Hartwick |
| 6. | **GA Cash Flows** | Ken Hartwick |
| 7. | **GA Debt Accumulation and Rating Requirements to Supporting Financing** | Carlo Crozzoli |
| 8. | **Preliminary SPV Financing Structure** | Ken Hartwick |
| 9. | **Business Case for OPG** | Carlo Crozzoli |
| 10. | **Next Steps – OPG Internal** | Catriona King |

VALUES ▪ SAFETY ▪ INTEGRITY ▪ EXCELLENCE ▪ PEOPLE AND CITIZENSHIP

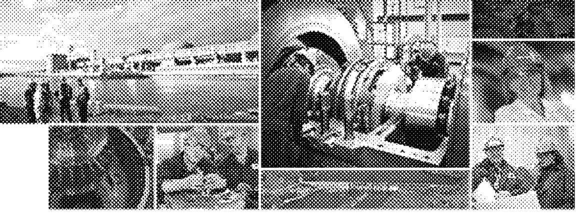


# How the Electricity Market Works

## Education Session to GOC Members

September 23, 2016

ONTARIO POWER GENERATION



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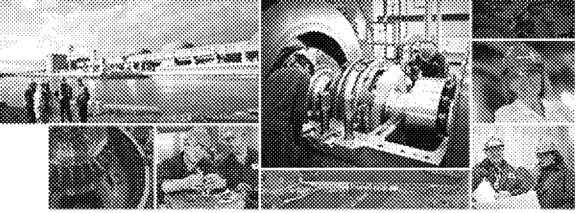
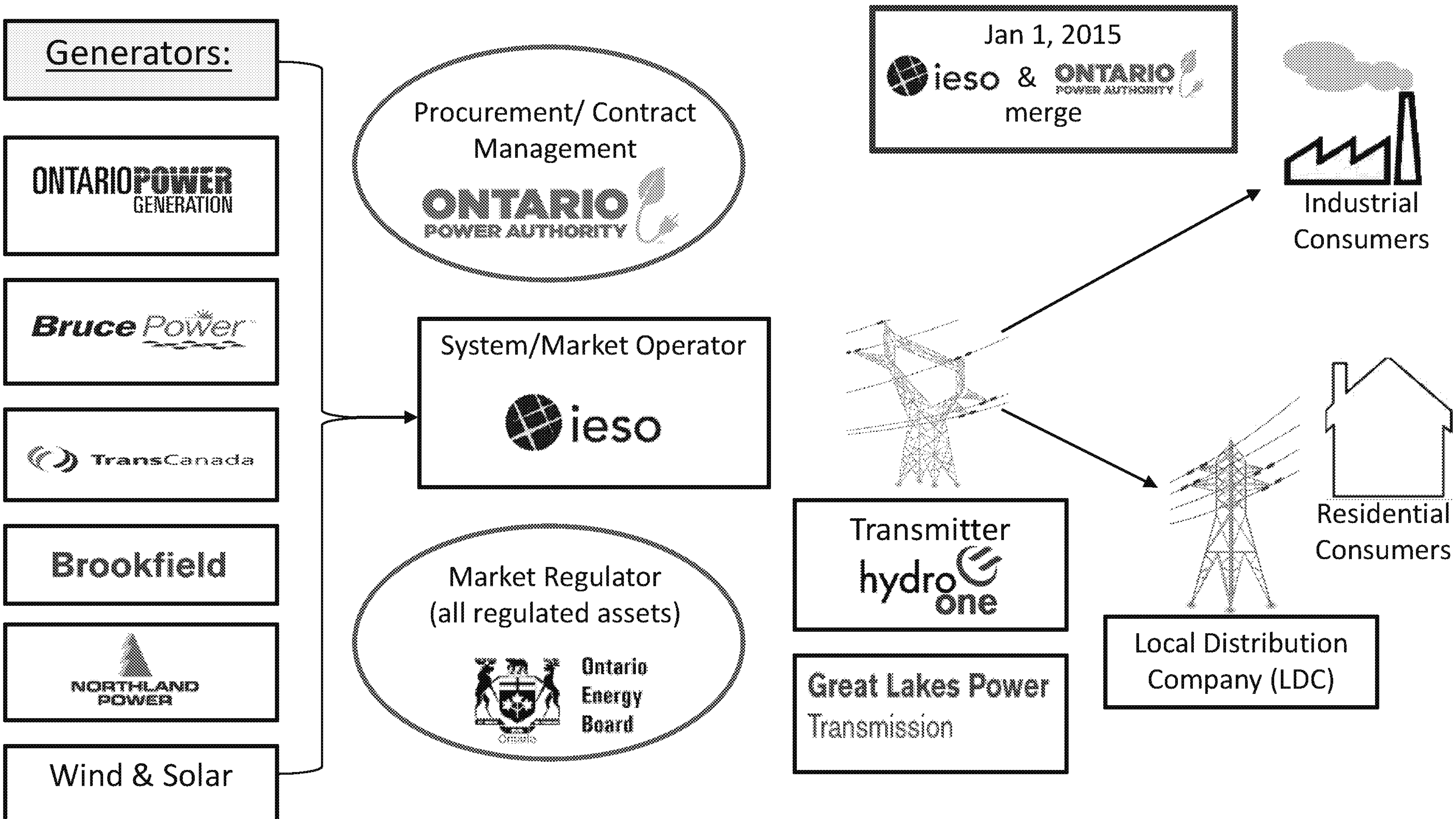
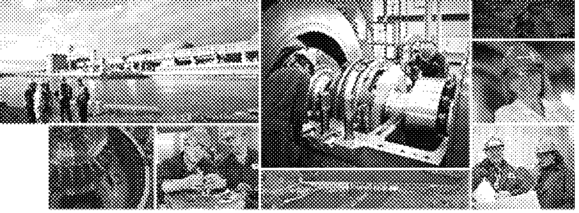
- Electricity Sector Participants
- Electricity Market
- Market Operation
- Market Settlements



# Electricity Sector

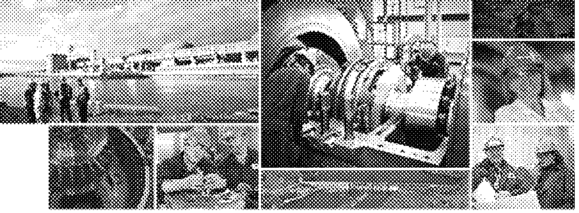




# Core Responsibilities

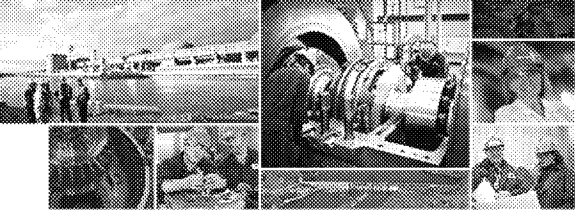
- IESO: Manages Reliability, Market Price, Dispatch, Settlements.
- IESO: Plans, procures, manages contracts (functions of former OPA).
- Hydro One: Operates Transmission system and rural Distribution system.
- There are 35,951 megawatts (MW) of installed generation in Ontario's electricity grid. *(Source: IESO)*
- OPG has ~17,000 MW of generating capacity:
  - nuclear ~6,600 MW
  - hydro ~7,400 MW
  - biomass ~350 MW
  - thermal ~2,100 MW, and
  - two co-owned gas plants—OPG's share ~550 MW).
- OPG: Generates on average ~8,800 MW.

1 MW = 1,000,000 Watts



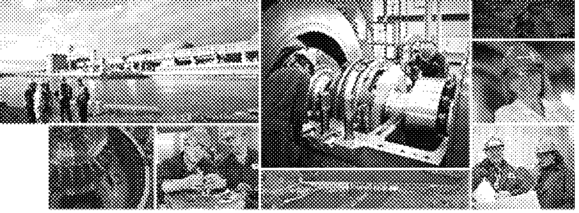
# Electricity Sector Participants

- Participants with Physical Facilities
  - Transmitters – High voltage (115,000 volts – 500,000 volts), long distance transmission (e.g. Hydro One)
  - Distributors – Low voltage (44,000 volts or less) distribution to consumers (e.g. Toronto Hydro)
  - Loads
    - Residential Consumers
    - Industrial and Commercial Consumers
  - Generators – Producers of electricity
- Participants without Physical Facilities
  - Traders/Wholesalers – Purchasing of energy from the electricity market for resale to retailers, large consumers and external jurisdictions
  - Retailers – Fixed rate contracts offered to consumers (e.g. Direct Energy)

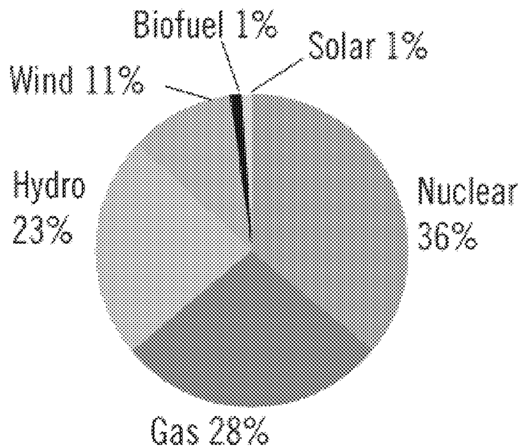


# Electricity Sector Entities

- Ministry of Energy – Develops energy policies and holds legislative responsibility for government agencies
- Independent Electricity System Operator (IESO) (market operations)
  - Operates bulk electricity system
  - Operates Electricity Market, sets electricity prices and performs financial settlements for Market participants
- IESO (formerly OPA) (planning)
  - Develops long-term system plan (e.g. Long-Term Energy Plan (LTEP))
  - Procures and manages supply contracts
  - Develops and manages demand response and conservation programs
- Ontario Energy Board (OEB) – Electricity market regulator and judicial decision making tribunal
  - OPG regulated assets: 2 nuclear stations, 65 hydro-electric facilities
  - Tx regulated
  - LDC regulated



# Ontario's System-Wide Electricity Supply Mix: 2015 Data




| | |
|---|---|
| Nuclear: | **12,978 MW** or 36% |
| Gas/Oil: | **9,942 MW** or 28% |
| Hydro: | **8,432 MW** or 24% |
| Wind: | **3,823 MW** or 10% |
| Biofuel: | **495 MW** or 1% |
| Solar: | **280 MW** or 1% |

*Source: IESO*

## Electricity Facts

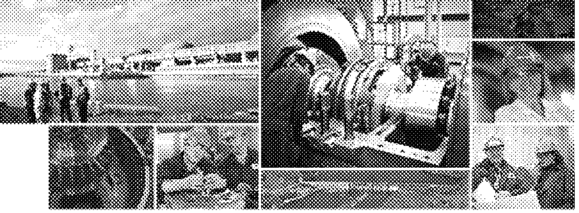
| ***Electricity sources*** | ***Ontario's Electricity Mix**** |
|---|---|
| Water power | 23.2% |
| Alternative power sources | 8.7% |
| Solar | 1.9% |
| Wind | 6.4% |
| Biomass | 0.4% |
| Waste | 0% |
| Nuclear Energy | 57.8% |
| Natural Gas** | 9.7% |
| Other | 0.5% |

*Includes both Tx (direct) and Dx (embedded) connected generation (Ontario Ministry of Energy)

**Includes generation from facilities that are predominantly natural gas (e.g., Lennox Generating Station)

Note: Figures may not add to 100% due to rounding

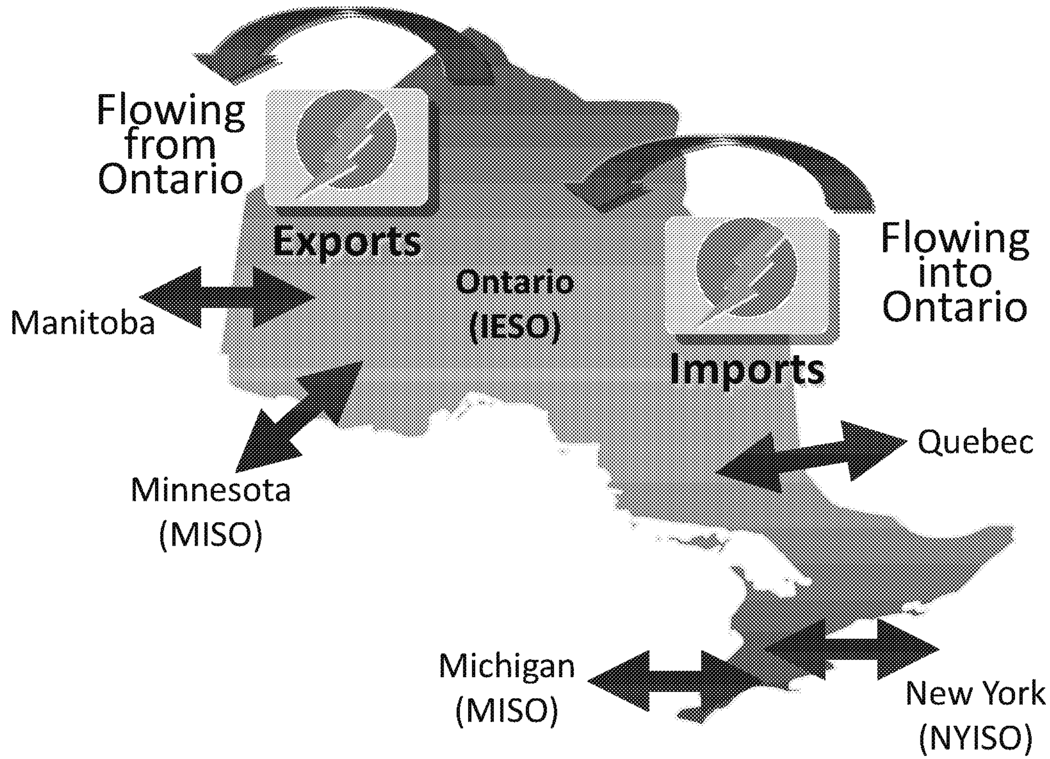
*Source: Ministry of Energy*

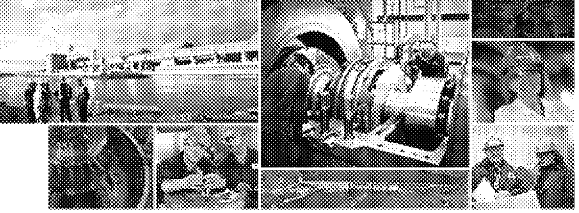


# Imports/Exports

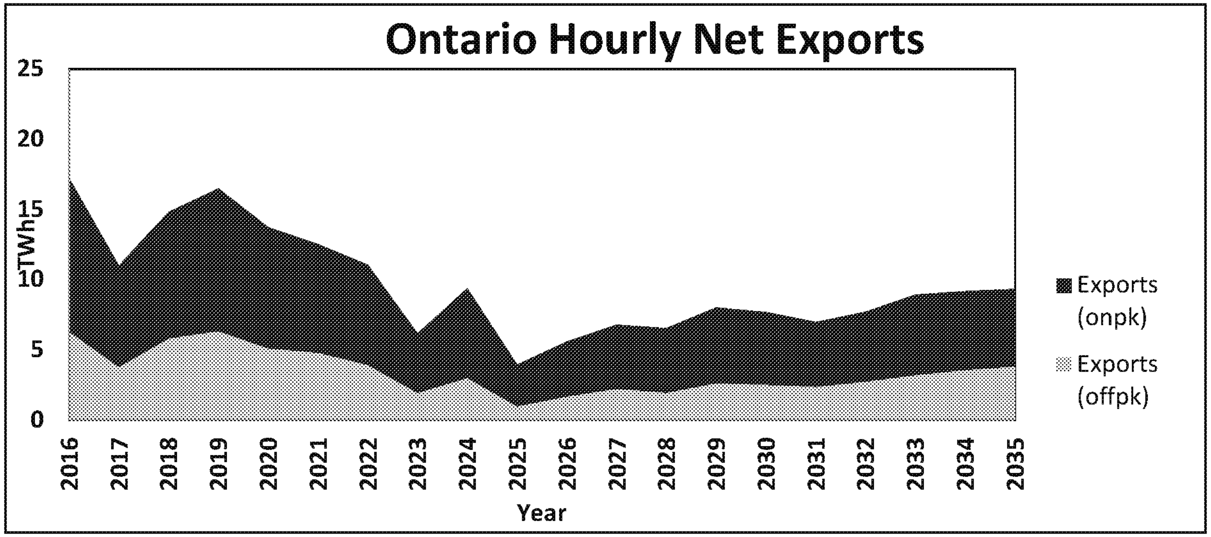
- Ontario trades electricity with neighbouring jurisdictions:
  - Energy Markets (MISO, NYISO)
  - Centralized Utilities (Quebec, Manitoba)
- Import and export quantities change hourly depending on market conditions in Ontario and neighboring jurisdictions.
- In 2015, Ontario was a net exporter. Total exports were ~22 TWh while imports were ~6 TWh.

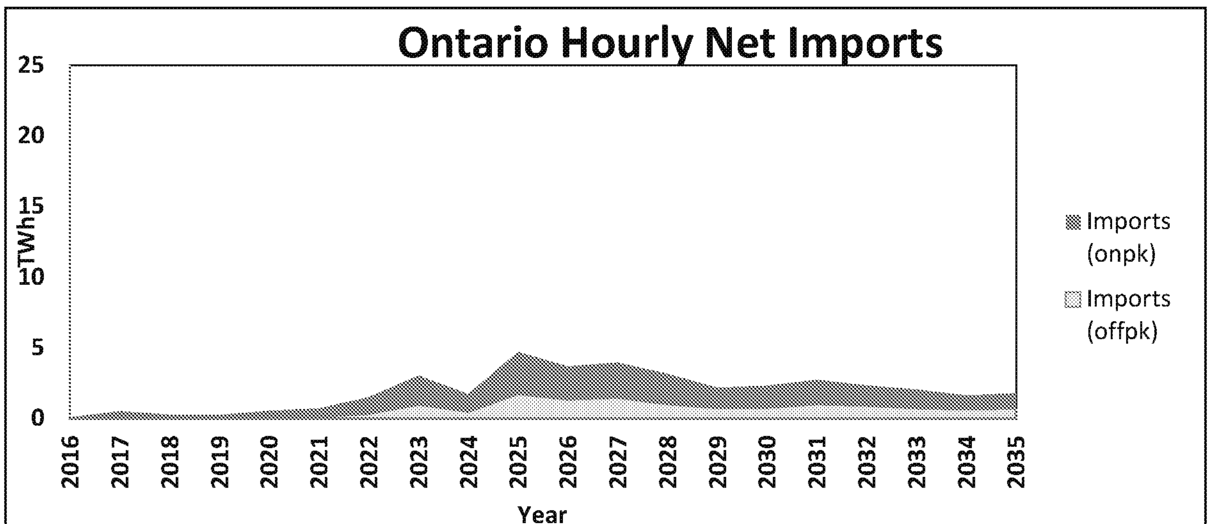
*1 TWh = 1,000,000 MWh*





# Imports & Exports – Historical and Forecast



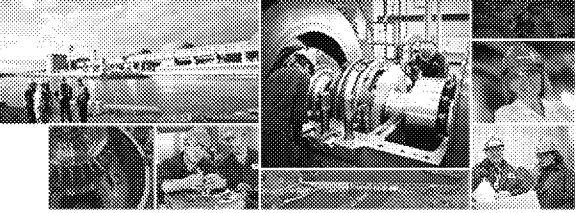




## Imports and Exports

The fact that Ontario is interconnected with neighbouring provinces and states improves electricity reliability. Ontario's high-voltage transmission grid is connected to Manitoba, Quebec, New York, Michigan and Minnesota.

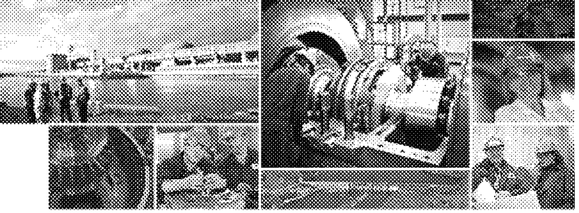
| Year | Imports (TWh) | Exports (TWh) |
|---|---|---|
| 2015 | 5.8 | 22.6 |
| 2014 | 4.6 | 19.1 |
| 2013 | 4.9 | 18.3 |
| 2012 | 4.7 | 14.6 |
| 2011 | 3.9 | 12.9 |
| 2010 | 6.4 | 15.2 |
| 2009 | 4.8 | 15.1 |
| 2008 | 11.3 | 22.2 |
| 2007 | 7.2 | 12.3 |
| 2006 | 6.2 | 11.4 |
| 2005 | 11.0 | 10.2 |
| 2004 | 9.8 | 9.5 |
| 2003 | 10.4 | 6.3 |
| 2002 | 7.1 | 3.9 |
| 2001 | 4.3 | 4.1 |
| 2000 | 5.1 | 5.5 |
| 1999 | 6.0 | 4.0 |

Source: IESO



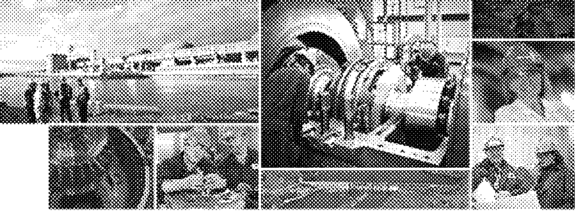
# Electricity Market

- Generators and imports submit energy offers to the IESO
- Exporters submit bids to buy energy
- IESO forecasts Ontario demand and economically schedules exports, imports and generation to balance supply and demand
- The intersection of supply and demand of electricity determines the Hourly Ontario Electricity Price (HOEP) and subsequent dispatch



# Market Operation

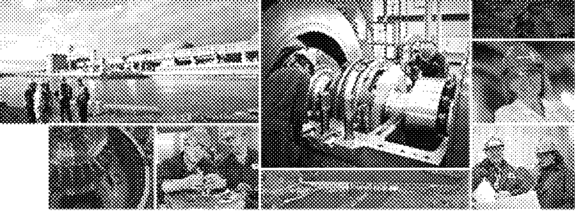
- The IESO continuously matches supply with changing demand
  - IESO schedules generators, imports and exports based on economic merit
- Selected generators receive dispatch instructions specifying required energy output to maintain the most economic supply to meet demand
  - Currently, generators with variable output (e.g. wind and solar) generate all available energy and are curtailable
  - Generators like Bruce Power can provide flexibility
- Selected imports and exports are scheduled hourly
  - Neighbouring jurisdictions ensure that net import/export quantities match selected schedules



# Market Settlements

- All generators and imports receive HOEP for the energy they inject into Ontario.
- All consumer and exports pay HOEP for energy used
- In 2015, the average HOEP was $21.66/MWh*
- With HOEP deemed insufficient to attract new generation, the OPA has entered into a number of contracts that provide additional payments to generators.
- In addition, OPG moved its nuclear and the majority of its hydro fleet into a regulated environment. The balance of OPG fleet is captured under a form of contract.
- There are no truly merchant unhedged generators in Ontario.
- Global Adjustment Mechanism (GAM) captures the difference between contract rates and HOEP.

* $10/MWh = 1 cents/kWh



# Market Challenges

- Surplus Baseload Generation
- Renewable Generation Impacts on the system
- Growth of Embedded Generation
- Nuclear Refurbishment
- Timing of future capacity additions
- IESO Market Renewal

ONTARIO POWER GENERATION

**FOR INFORMATION to the Board of Directors**

**March 10, 2017**

**Implementing the Province's Announcement on Mitigating Electricity Prices**

**REFINANCING THE GLOBAL ADJUSTMENT**

## REASON FOR REPORT

On March 2, 2017 the Province announced the "Ontario's Fair Hydro Plan" which includes the "Refinancing of the Global Adjustment". The Province intends to introduce legislation that would allow the IESO and OPG to work together to develop a proposal to refinance the Global Adjustment over a longer period as part of their response to reduce the customer bill by 25% for residential electricity users.

The purpose of this submission is to provide the Board with an overview of the refinancing of the global adjustment charge (GAC) together with the role that OPG has been asked to examine by the Shareholder and the steps that would need to be taken to allow for the implementation of the Province's policy objective while protecting OPG core business. This report reflects OPG's preliminary assessment of the proposed financing structure and corresponding requirements for a GAC financing program which, when finalized, OPG would submit to the Province for concurrence / approval.

## CONCLUSION

As requested by the Shareholder, OPG has examined how it could participate in the government's plan to reduce electricity bills by deferring a portion of the GAC for collection in future periods. While the total plan could amount to $20B to $40B in deferred GAC, OPG has proposed a financing structure, based on an approach used in the US market for utility cost recovery financing, that:

- Aligns with the Province's goals to reduce electricity bills without increasing the deficit.
- Restricts financial risk to OPG to the amount of "at risk equity" in the financing vehicle.
- Provides an opportunity to contribute positively to OPG's Net Income.

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This financing structure is dependent on the enacted legislation capturing the requirements established by precedent transactions in the United States and the overall market capacity for this type of financing. Notwithstanding the above, OPG could be exposed to additional political and reputational risk given our association with this initiative.

## HIGHLIGHTS

### I. BACKGROUND

The Province has indicated that it is taking steps to reduce residential electricity bills in the near term. It has identified reductions in the GAC charged to electricity customers as one of the more significant measures to achieve its policy goals. The GAC accounts for the differences between the market price of electricity and the rates paid to regulated and contracted generators and for conservation and demand management programs. The GAC has become the largest component of electricity bills and is forecasted to make up about 60 percent of customer bills in 2017.

Ontario is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily Regulated Price Plan ("RPP")-eligible customers). The exact quantum and duration of the program is still not known but, based on discussions with the Province, it appears that GAC charges of approximately $2.5B per year (on average) for the next 10 years would be deferred and collected over future periods, commencing after the deferral period. A combination of senior debt and subordinated debt (mainly sourced by additional equity from the shareholder) would be issued to fund the amount deferred. The financing cost of the debt and other costs of running the program would form part of the amounts recovered from customers over the term of the program.

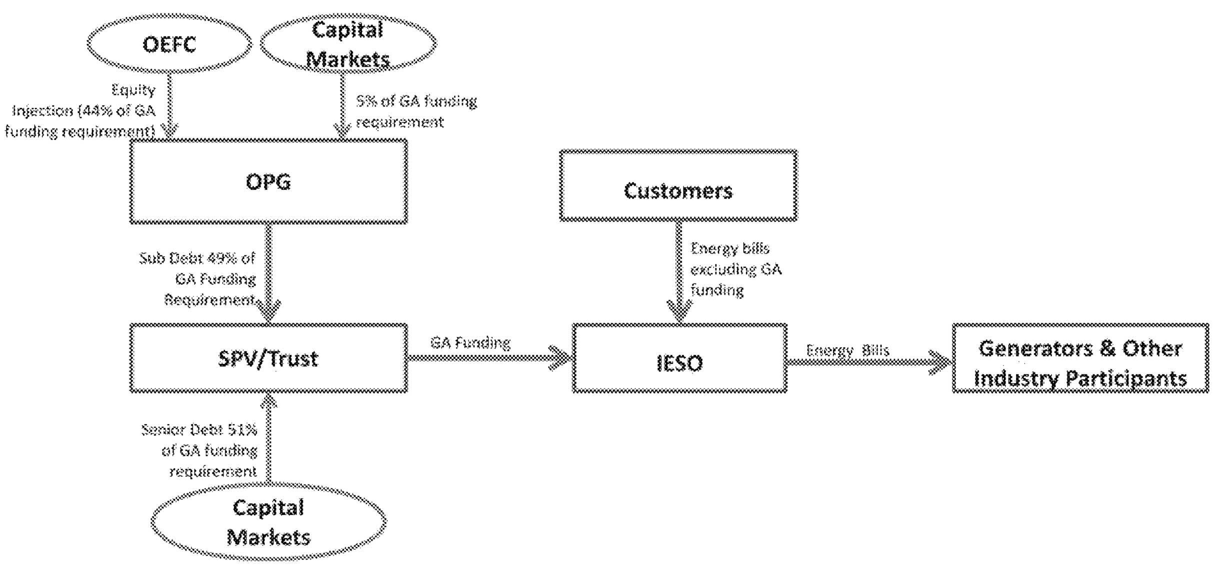
OPG had proposed the deferral and associated financing be captured in the IESO as it administers the global adjustment. The IESO's external auditors (KPMG) also recommended this approach to the Province. However, the Province concluded that this is not its preferred option. Instead, the Province has requested that OPG administer the GAC deferral, because of OPG's participation in the market, regulatory knowledge and the potential ability to consolidate the activity and accounting within OPG rather than the Province. The initial proposal by the Shareholder was to have OPG take on this role directly rather than through a Trust/Special Purpose Vehicle ("SPV"). This would have the impact of significantly impairing OPG's core operating business and credit rating.

Given the significant amount of financing required for the GAC deferral, OPG has developed a SPV/Trust financing structure (depicted below) to:

- restrict the financial risk to OPG
- maximize the cost-effectiveness of the SPV financing vehicle and
- allow for consolidation into OPG financial statements.

The proposed approach would have the IESO set up a regulatory asset related to the GAC deferral plan and then immediately securitize or sell this asset to the SPV for cash proceeds. The SPV would recognize an "intangible" asset on its books, equating to the future right to recover this amount, protected by legislation. In order for the SPV to purchase this asset the SPV will obtain the financing from two key sources: 51% directly from capital markets and 49% as subordinated debt from OPG. OPG targets obtaining 44% of this financing as an equity injection from the Province and 5% from capital markets.

All of the percentages shown below are indicative, and will be highly dependent on the legislation that the Province will enact:




OPG has assessed the options to ensure shareholder support of OPG's involvement with the Global Adjustment deferral program. At this time, we believe the policy direction announced by the government on March 2, 2017 asking OPG to work with the IESO to propose options to accomplish the Province's policy objectives provides an opportunity for OPG to propose a course of action and ask for Shareholder approval of the proposal.

## II. LEGAL CONSIDERATIONS

### 1. Ring Fencing

- An SPV structure allows the obligation to debt holders to be ring-fenced from OPG even though for external reporting purposes the SPV, if structured properly and controlled by OPG, is consolidated into OPG's financial statements.

- The SPV holds the debt used to fund the deferral that is secured by a right to charge customers an amount to recover the debt and associated financing and administration costs. The SPV provides separation from OPG and limits the impact of events in one entity affecting the other entity. The SPV would have no other operations that could add risk to the entity, dilute bondholder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings.

2. **Strong Collectability Legislation**
   - Establish the right to charge customers in the future as a legislated property right which is irrevocable. This approach is modeled after a practice followed in the United States to support financing for utility cost recovery charges such as the cost of repairing damage to facilities caused by major storms.
   - Restrict the ability of future governments to eliminate or reduce the recovery. If this is not provided for in the legislation a limited guarantee from the government may be required for financing purposes
   - Flexibility to increase customer bills to ensure full recovery.

## III. FUNDING OF THE SPV

- The SPV will be funded with multiple levels of debt:
  - 51% senior secured debt from external markets
  - 39% senior subordinated debt from OPG which will be funded by way of equity contribution from the Province
  - 10% junior subordinated debt from OPG that is targeted to be funded 5% by way of equity contribution from the Province and 5% raised from the external debt markets by OPG.
- The GA financing would be considered a customized debt product within the Asset Backed Securities (ABS) segment of the securitization market. Total 2016 US market issuance in this segment was $207B and total 2016 Canadian market issuance was $22B. Given the potential size of the program, the annual funding requirements and the extended collection period there could be capacity and/or pricing challenges in placing this in the market, even though initial indications are that an annual issuance of $1B to $2B by the same issuer would be accepted by the market.
- Provincial government direct/indirect funding of the SPV cannot exceed 50% otherwise the SPV would be considered an entity of the Province and would be consolidated into the Province.
- The senior subordinated debt from OPG would be sourced from the OEFC by way of an equity injection into OPG to better manage the overall financing requirements and minimize impact on credit metrics.
- The junior subordinated debt from OPG would be sourced 50% from the OEFC via an equity injection into OPG and 50% from external markets which is needed to support consolidation of the SPV with OPG. Total equity funding from OEFC amounts to 44% of SPV requirements.
- The net effect of this funding structure is that OPG will be responsible for raising and on lending some element of the funding into the structure. OPG is expected to earn a positive spread over its funding costs.

## IV. CREDIT RATING IMPLICATIONS

- Rating agencies would base their assessment on the consolidated financial statements which include the SPV obligations even though the obligations have been ring-fenced from OPG.
- Although the SPV is funded 100% by debt upon consolidation only 51% of it is recognized on OPG's financial statements and the balance recognized as equity. OPG will recognize 100% of the revenue from the SPV. Since there would be no financing cost for the Province's equity funding in the consolidated statements this would increase both net income and EBITDA which will help to mitigate the impact of higher total debt levels on credit metrics.
- Credit metrics are generally within the limits for the rating, however this is dependent on the SPV being able to record revenue on the intangible asset and elimination of the subordinated debt on consolidation.

## V. OPERATIONAL ASPECTS

- A number of elements are required to support consolidation of the SPV within OPG, including:
    - OPG must direct the activities of the SPV;
    - The Province cannot veto OPG's decisions regarding activities of the SPV; and
    - OPG must determine operational and financial policies of the SPV and capital and operating budgets.
- OPG's net exposure to the SPV is targeted to be 5% of funding requirements reflecting 50% of junior subordinated obligations of the SPV sourced by OPG through capital markets. This subordinated obligation of the SPV reflects OPG's "at risk equity" and will earn a corresponding return.

OPG will establish appropriate operating/service arrangements with the SPV covering the cost of its operations and management. Once the SPV has been operationalized, OPG estimates it would require about 2 FTEs to manage ongoing activities, including financing. External transaction costs, eg. legal, bank and dealer fees, will be a direct pass through to the SPV .The costs for the management and operating services arrangement will likely be subject to OEB oversight and/or prudency review.

## VI. RISKS

1. **Province Accounting Treatment**
   Elements of the structure were established to support consolidation of the SPV into OPG. While these criteria have been reviewed with OPG's external auditors, there is risk that the criteria in totality may be viewed by other professional auditors in a different light. As there is no "bright line" test to determine control in this situation, the auditors of the Province (the Auditor General (AG) of Ontario) may land on a different conclusion when it comes to auditing the Province's statements. Our understanding is that to date, very limited discussions have taken place between the Province and the AG regarding this transaction. In the end, it is possible that these criteria may not be sufficient to establish OPG as risk owner of the SPV and the SPV may need to be consolidated directly with the Province.

2. **Financeability of the SPV**
   The legislation establishing the structure and the property right for recovering the financing and associated costs may not be adequate for financing purposes, resulting in more expensive financing or an inability to obtain the required external financing. The GA financing would be one of the largest customized financing programs within the ABS market segment. Given the potential size of the program, the annual financing requirements and the extended collection period there could be capacity and/or pricing issues in placing this financing in the market.

3. **Political/Legislation Risk**
   Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.

4. **Credit Rating**
   OPG Net Income and EBITDA benefit is dependent on the ability of the SPV to record revenue on the intangible asset. There is also the potential for OPG's credit rating to be downgraded if the legislative structure passed by the Province is not adequate to support long term recoverability, inability to record revenue on the intangible asset or agencies view equity injection as debt.

5. **Reputational Risk**
   The public's perception of the GAC plan and OPG's association with it may be complicated to keep separate and the public may directly associate OPG with high customer bills in the future.

6. **Regulatory Risk**
   This plan will be unveiled during the commencement of OPG's oral hearing with the OEB. The possibility of OPG's association with the GAC plan and a negative result to OPG's application and evidence (particularly the smoothing evidence that is being revamped as a result of the recent regulation change to O. Reg 53/05) is high and OPG will need to position and distance the GAC plan from its application to reset hydroelectric and nuclear regulated rates.

**VII. BENEFITS**

1. OPG's Net Income and EBITDA increases as a result of the use of added equity to fund 44% of the GAC deferral. For each $2B of deferred GAC charges, net income is estimated to increase by about $30 million and EBITDA by about $100 million.

2. OPG's credit metrics would be generally maintained within established limits despite adding about $15B in debt over the program period.

3. Implementing amendments to OPG's articles and the Electricity Act which will allow for greater flexibility for future commercial purposes and/or other growth initiatives.

**Submitted by:**

*"Original signed by:"*

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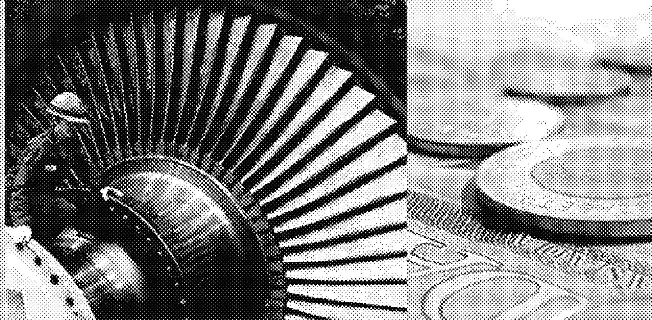
Ken Hartwick
Chief Financial Officer & Senior Vice President – Finance



A TRUSTED BUSINESS PARTNER DRIVING VALUE

# Global Adjustment Components 2016

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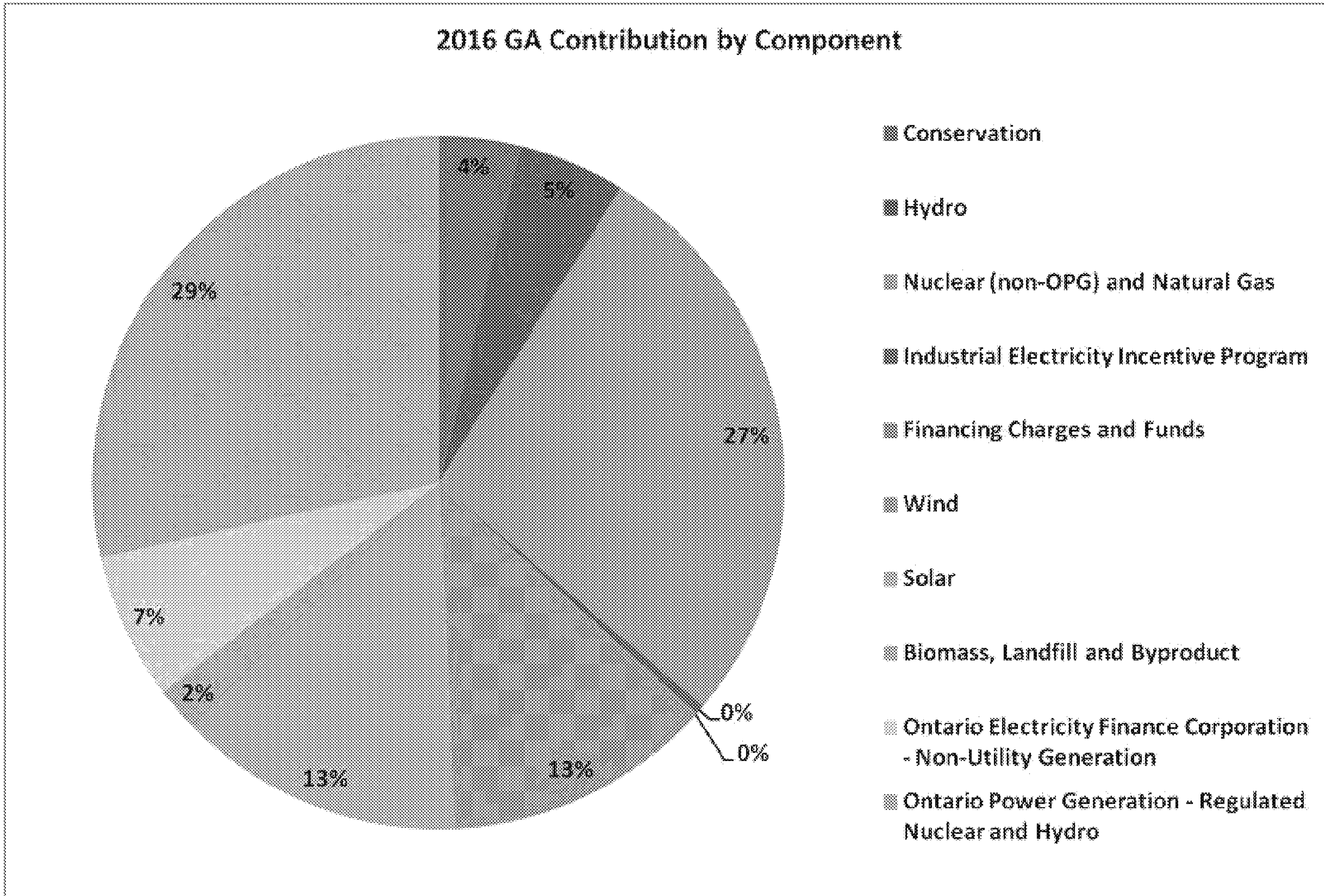
# Global Adjustment Components 2016



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# Global Adjustment Actuals 2016

| 2016 GA Components | 2016 $M | % |
|---|---|---|
| Conservation | 467.10 | 4% |
| Hydro | 623.23 | 5% |
| Nuclear (non-OPG) and Natural Gas | 3,371.20 | 27% |
| Industrial Electricity Incentive Program | 60.18 | 0% |
| Financing Charges and Funds | (6.32) | 0% |
| Wind | 1,551.66 | 13% |
| Solar | 1,629.96 | 13% |
| Biomass, Landfill and Byproduct | 278.36 | 2% |
| Ontario Electricity Finance Corporation - Non-Utility Generation | 841.80 | 7% |
| Ontario Power Generation - Regulated Nuclear and Hydro | 3,516.20 | 29% |
| **GA Total by Components** | 12,333.36 | 100% |



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March 10, 2017

***Special Committee of the Board***

***Mandate***

**Whereas** on March 2, 2017 the Province announced the "Ontario's Fair Hydro Plan" which includes the "Refinancing of the Global Adjustment";

**Whereas** the Province intends to introduce legislation that would allow the IESO and OPG to work together to develop a proposal to refinance the Global Adjustment Charge (GAC) over a longer period as part of the Province's announcement to reduce the customer bill by 25% for residential electricity users;

**Whereas** the Province requested that OPG consider participating in the Province's refinancing plan because of OPG's participation in the electricity market, existing customer relationship as the low cost electricity generator, regulatory knowledge, the scope of OPG's balance sheet and experience managing investments of this magnitude, and the potential ability to consolidate the activity and accounting within OPG;

**Whereas** OPG's participation in the Province's refinancing plan could attract considerations of a material nature for OPG relating to legal, funding, credit rating, operational and risk (including reputational risk) issues, as well as potential benefits to OPG;

**Whereas** OPG has assessed that the Province's refinancing plan could amount to $20B to $40B in deferred GAC, OPG has set out certain conditions precedent for OPG's participation in the plan and a financing structure that, (1) protect the integrity of OPG's core business as an electricity generator; (2) set out OPG's participation via a special purpose vehicle (SPV) whose obligations are not guaranteed by OPG in order to restrict financial risk to OPG to the amount of "at risk equity" in the financing vehicle; (3) provide an opportunity to contribute positively to OPG's Net Income and an attractive risk-adjusted return; and (4)includes other conditions or considerations required for a positive business result for OPG;

**Whereas** the Ministry of Energy intends to implement the refinancing of the GA quickly so that the benefit is felt by customers on their May, 2017 bills, and whereas the Ministry of Energy has established a series of meetings among Energy, the IESO and OPG to implement the various elements of refinancing the GAC, and whereas the Province intends to introduce the requisite legislation referenced above in early April 2017; and

**In consideration of the foregoing** and in recognition of its fiduciary duties and duties of oversight, the Board of Directors of OPG hereby establishes a Special Committee of the Board with the following mandate:

- Provide timely strategic and other guidance to OPG management participating in the Ministry of Energy's implementation meetings;
- Assess the financing and operational plan of the SPV including the proposed governance framework for the entity and its impact on OPG's future financial results and performance measures.
- Retain, if necessary, external advisors to report to the Special Committee and assist the Committee in providing guidance to OPG management recognizing that management is in the process of engaging accounting, legal and banking advisors; and
- Report and make recommendations to the Board with respect to OPG's participation in the Province's implementation of the refinancing plan, particularly with respect to OPG achieving its conditions precedent for participating.

***Membership***

The members of the Special Committee are: George Lewis (Chair), Bernard Lord, Bill Coley, Peggy Mulligan, Yezdi Pavri and Lisa DeMarco. Other directors may be called upon as needed for consultation.

***Meetings and Reports to the OPG Board***

The Special Committee will need to be as flexible as possible in meeting, giving timely guidance to OPG management, and reporting to and making recommendations to the Board. The Committee may meet in person or by telephone as required. The Special Committee of the Board will report to the Board at the next scheduled Board meeting or on a more frequent basis as necessary. OPG Management will provide support as requested.

***Term of the Special Committee***

The Special Committee will continue to serve until the Board has approved its recommended terms and/or structure, rights and obligations of the SPV as concurred with by OPG's external auditors and the Province has enacted legislation that is consistent with the Board's approval; or unless its mandate has been renewed.

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March 10, 2017

# FINANCING FOR ONTARIO'S FAIR HYDRO PLAN

## REASON FOR REPORT

This submission is to provide the Special Committee an overview of the draft workplan for OPG's participation in financing Ontario's Fair Hydro Plan. This submission is for information purposes.

## CONCLUSIONS

1) Strength of the Legislation is key to financeability
2) Protection of OPG operating company is paramount to participation as the financing platform
3) Global adjustment financing platform will be developed to access both Canadian and US markets
   - Provides flexibility to access best pricing at the time of deal execution
4) Legislation is targeted to be implemented in time to be reflected on May customer bills

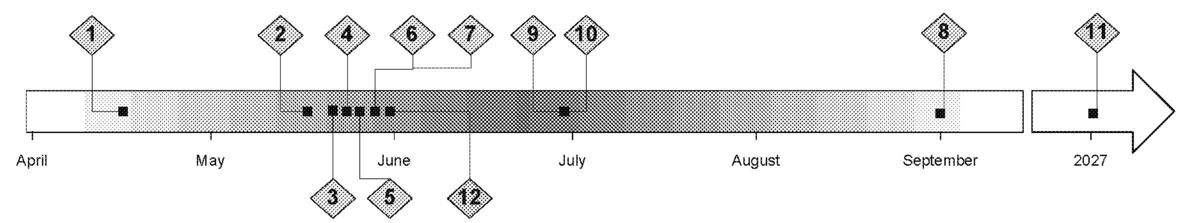
## HIGHLIGHTS

### Summary

Below is an overview of the elements of the draft workplan to set up a trust special purpose financing vehicle (SPV) that would hold the claim on future customers and the debt issued to fund the payment to the IESO in accordance with Ontario's Fair Hydro Plan. All elements of the work plan will consider the key requirements of OPG with respect to elimination or mitigation of risks.

### Workplan Overview

The draft workplan below is divided into major components required to set up the trust SPV as part of Ontario's Fair Hydro Plan. Each major component is divided into sub-components that provide further aspects / characteristics / requirements.




**1. Legislative Requirements [Stakeholders: OPG, IESO, OEB, MOE]**

a. *Characteristics of Regulatory Asset*
   Key aspects will include collection rights, claim/counterclaim protection, future governmental action protection, saleability into SPV, protection from seller's creditors, OEB regulatory asset recognition, oversight of administration costs and recovery mechanism, and true-up process.

b. *Legislative amendments to implement the structure*
   - Provisions in the Electricity Act (and OPG's articles) will be amended/updated to allow flexibility in OPG's corporate structure. Amendments would be similar in nature to previous amendments made to Hydro One's governing provisions in the Electricity Act. They would, for example, allow OPG to create and operate through subsidiaries, and also enable OPG to raise financing through public offering of debt.
   - The electricity legislation will be amended to implement the deferral and financing of the GA, including amendments:
     - to reflect that the IESO may defer collection of a portion of the GA;
     - to create a "regulatory asset" consisting of the right to recover, over time, the amount of GA being deferred, together with interest and other financing costs;

- to allow the IESO to sell that regulatory asset to a third party (trust/financing vehicle);
- that authorizes the OEB to recognize the regulatory asset (which will likely comprise a deferral account) and allows the owner of the asset to recover the principal amount and financing costs for the GA deferral over time; and
- that also provides the OEB with no or very limited rights to review the terms on which the GA deferral is recovered.

**2. Financing Process [Stakeholders: OPG, IESO]**

a. *Set up Financing Vehicle*

The SPV will be established with a simplified trust indenture to facilitate flexible financing (issue short and long term debt in Canadian and US markets, ability to warehouse, ability to enter into cross currency swaps). The sole purpose of the SPV will be to acquire the regulatory asset and raise debt. A financial service and management agreement with OPG will also be required.

b. *Oversight*

Appropriate oversight structure to be established independent of OPG management to review and monitor financing strategies, operating budgets and results of SPV. Reporting and monitoring requirements of Province, IESO and OEB and OPG to be determined.

c. *Operations*

Processes will be established for deal execution, operating cash management, regulatory reviews and credit rating agency reviews. Agreements will be established to define relationships with IESO (sales & servicing), billing payment and other administrative services, banking arrangements, subordinated debt agreement with OPG.

**3. Equity Injection Process [Stakeholders: OPG, Ministry of Energy, Ministry of Finance]**

The Province will require Treasury Board approval for periodic appropriations to fund equity injections into OPG. OPG Board approval will be required to issue a specified number of shares that can be periodically issued to the Province. The actual number of shares issued will be based on IESO forecast of funds required.

**4. IESO and Trust Operational Process [Stakeholders: OPG, IESO]**

Establish processes to facility the SPV's purchase of the IESO's regulatory asset, including timing (notice periods), frequency, fund flows, GA shortfall forecasts and true-up mechanisms.

**5. Debt Issuance – General Planning [Stakeholders: OPG, MOF]**

Develop debt issuance plan considering need for liquidity/working capital, debt profile (short/long term), debt composition (senior/subordinated), marketing plan (Canada and US), financing amounts and timing, credit rating agency legal opinions and required approvals.

**6. Debt Issuance – Subordinated [Stakeholders: OPG]**

Establish subordinated debt characteristics (risk, return, cash flows), repayment terms, issue frequency/timing and required approvals.

**7. Debt Issuance – Short Term [Stakeholders: OPG]**

Ability to aggregate and warehouse using short term CP / ABCP.

**8. Debt Issuance – Long Term [Stakeholders: OPG]**

Key steps in establishing OPG external long term debt financing include the following:

- Select bank advisor for Canadian market
- Select bank advisor for US market
- Select credit rating agency and establish high investment grade requirements
- Seek credit rating agency legal opinions (identified above in section 5)
- Ongoing financial and legal due diligence
- Credit rating agency presentation and follow-up Q&A
- Obtain preliminary or pre-sale rating
- Develop maturity profile if flexibility available
- Draft and execute offering memorandum, agency agreement and other legal documents

- Prepare marketing materials
- Marketing, road shows, investor one-on-ones
- Investor due diligence and collection of expression of interest
- USD denominated debt - ISDA contracts for swap arrangements and potential collateral requirements

**9. Recovering Interest, Administration and Other Financing Costs from IESO [Stakeholders: OPG, IESO]**

Establish basis of cost (actual or accrued), documentation requirements, funds flow timing and frequency.

**10. Paying Interest, Administration and Other Financing Costs to Providers [Stakeholders: OPG, IESO]**

Establish bank accounts, basis of cost (actual or accrued), documentation requirements, funds flow timing and frequency, required approvals and administration agreements (either with trust administrator or OPG).

**11. Recovering Principal from IESO [Stakeholders: OPG, IESO]**

Establish basis of recovery (regulatory asset schedule / actual financing amortization or maturity / other method), documentation requirements, approvals, timing and frequency.

**12. Accounting Requirements and Process [Stakeholders: OPG]**

Establish overall accounting requirements for trust, regulated asset, consolidation with OPG, operational control of trust and restrictions on regulated asset. See further details in Appendix 1 – Terms Necessary for OPG to Consolidate the Global Adjustment Trust.

**Submitted by:**

*"Original signed by:"*

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Ken Hartwick
Chief Financial Officer & Senior Vice President – Finance

## APPENDICES

1. Terms necessary for OPG to consolidate the Global Adjustment Trust

Appendix 1

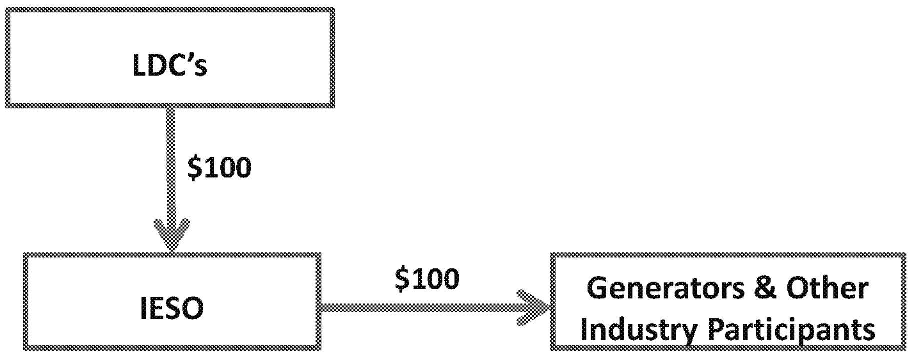
**Terms necessary for OPG to consolidate the Global Adjustment Trust**

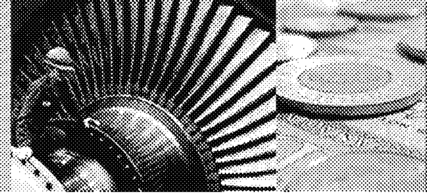
| Issue | No. | Requirements |
|---|---|---|
| Directive | 1 | The Trust must be undertaken by OPG as a business initiative on its merits. A Shareholder Directive is to be limited to direct OPG to investigate the option of establishing a Trust vehicle to administer, finance and operate the Global Adjustment plan and the operation of that Trust and the control, risk and rewards of that Trust will determine its consolidation into OPG as a business enterprise |
| Trust | 2 | The Trust should not operate in a predetermined way such that OPG does not have decision-making authority over the Trust's ongoing activities after its formation (i.e. should not operate on 'autopilot'). |
| | 3 | OPG must have the ability to appoint and remove the Trustee (or Board of Trustees), with no veto right by the Province. |
| | 4 | No party shall have the ability to remove OPG from its role and authority in the Trust. |
| | 5 | The Province cannot have the right to be able to veto OPG's decisions about the relevant activities of the Trust. OPG must have the power over the relevant activities of the Trust and be compensated. The relevant activities of the Trust include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. |
| | 6 | OPG must have the power to determine or change operating and financing policies of the Trust, which will affect the variability of risks and returns. |
| | 7 | OPG must have the power to establish operating and capital budgets of the Trust. |
| | 8 | The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:<br>a. The Trust<br>b. Any of OPG's investments in the Trust<br>c. The most subordinated debt of the Trust |
| | 9 | OPG must own greater than 50% of the most subordinated debt and must be no less than 5% of the subordinated debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. |
| | 10 | OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:<br>a. The cash flow from the restructured asset shall include interest determined based on a relevant benchmark that is appropriate relative to the restructured asset, plus an appropriate margin consistent with the relevant market and other risks<br>b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the Trust to achieve a more favourable return compared to the benchmark for interest on the restructured asset<br>c. The Trust shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the Trust to delineate financing of lower risk investment and investment that would bear higher residual risk. The delineation would limit OPG's self-funded investment to a reasonable level in order to allow OPG to remain a self-sustaining entity.<br>d. OPG shall, through its ownership of the most subordinated |

| | | |
|---|---|---|
| | | liability, be able to capture and retain the pricing difference between cost of financing and benchmark for interest on the restructured asset, or any residual risk of restructured asset. The targeted return of the subordinated liability should be reflective of the underlying risks and compensate holders for active management that would be required.<br>e. OPG should participate in the detailed design of the above and the Trust documentation to ensure that it has substantive power and variability, which will allow OPG's Board of Directors to evaluate the opportunity as a business initiative instead of through a shareholder directive.<br>Defined Forced Majeure for emergency events (e.g. unlikely credit market event or disruption where it is not possible to borrow from the market at a reasonable rate), OEFC may provide bridge financing beyond the designated percentage. |
| Legislation | 11 | The Legislation must require interest, carrying and administrative costs to be paid to the Trust on a monthly basis, so that the Trust is able to recognize appropriate revenue to offset any ongoing costs. |
| | 12 | The Legislation must dictate the manner in which the restructured asset would be determined, collected, and the period of collection, so that the determination of the restructured asset will not be subject to the Province's decisions on an ongoing basis, but determined based on a formula. Alternatively, the Legislation may allow for an adjustment to the pre-determined deferral formula based on specific parameters that would limit the adjustment to the restructured asset. Adjustments beyond the specific parameters would require approval by the Board of Trustee. |
| | 13 | The Legislation must be written to avoid legal or constitutional challenges and be seen as virtually unchangeable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. Should a future government alter or repeal the legislation, the debt held in support of the deferred amounts would become payable by the Province directly, not by OPG or the Trust. |
| | 14 | The spirit of the above terms should be reflected in the Trust Indenture Agreement as well as Legislation, wherever possible. |

# Current Cash Flow

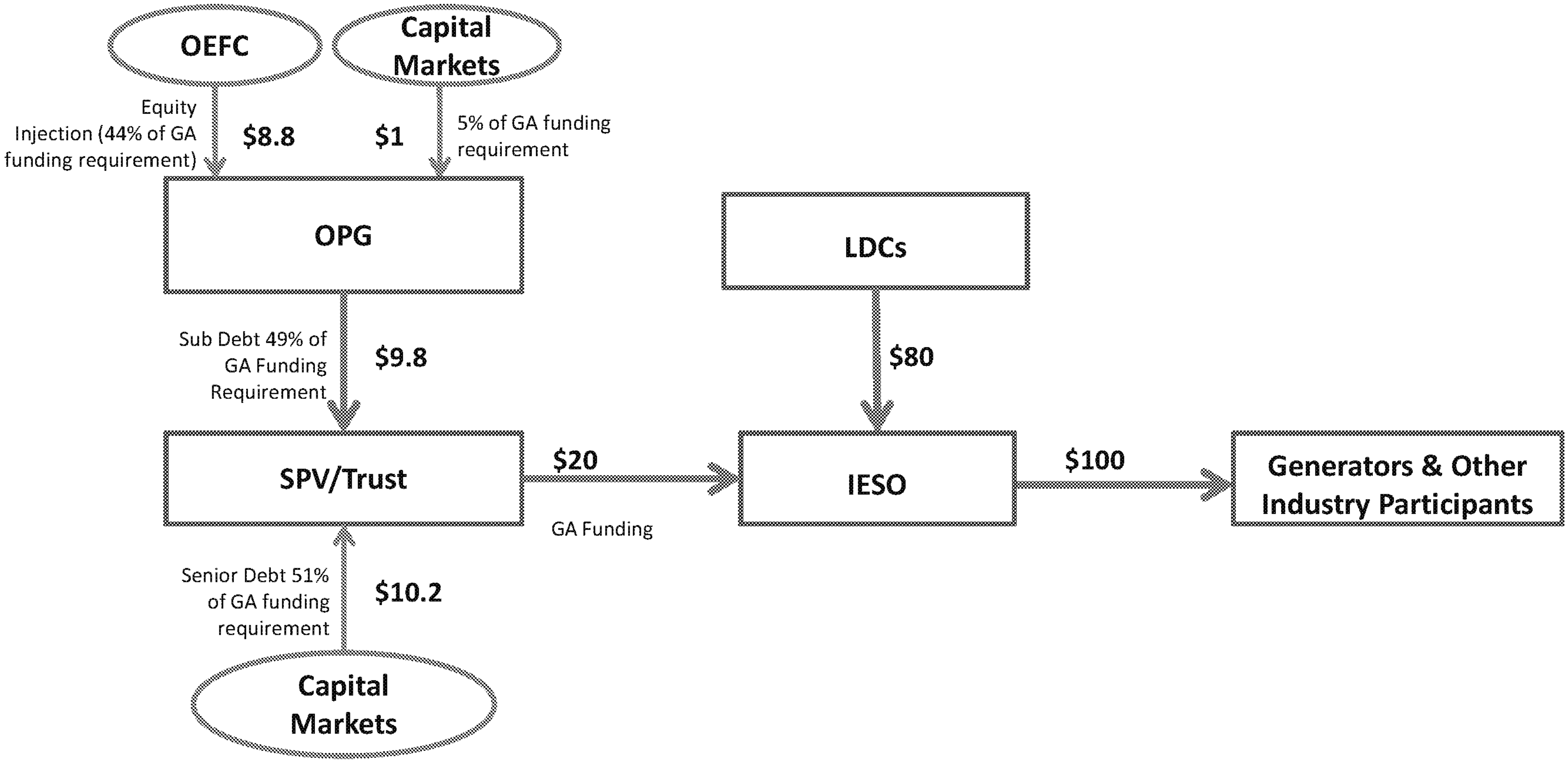
- Assume $100 to be Paid to Generators





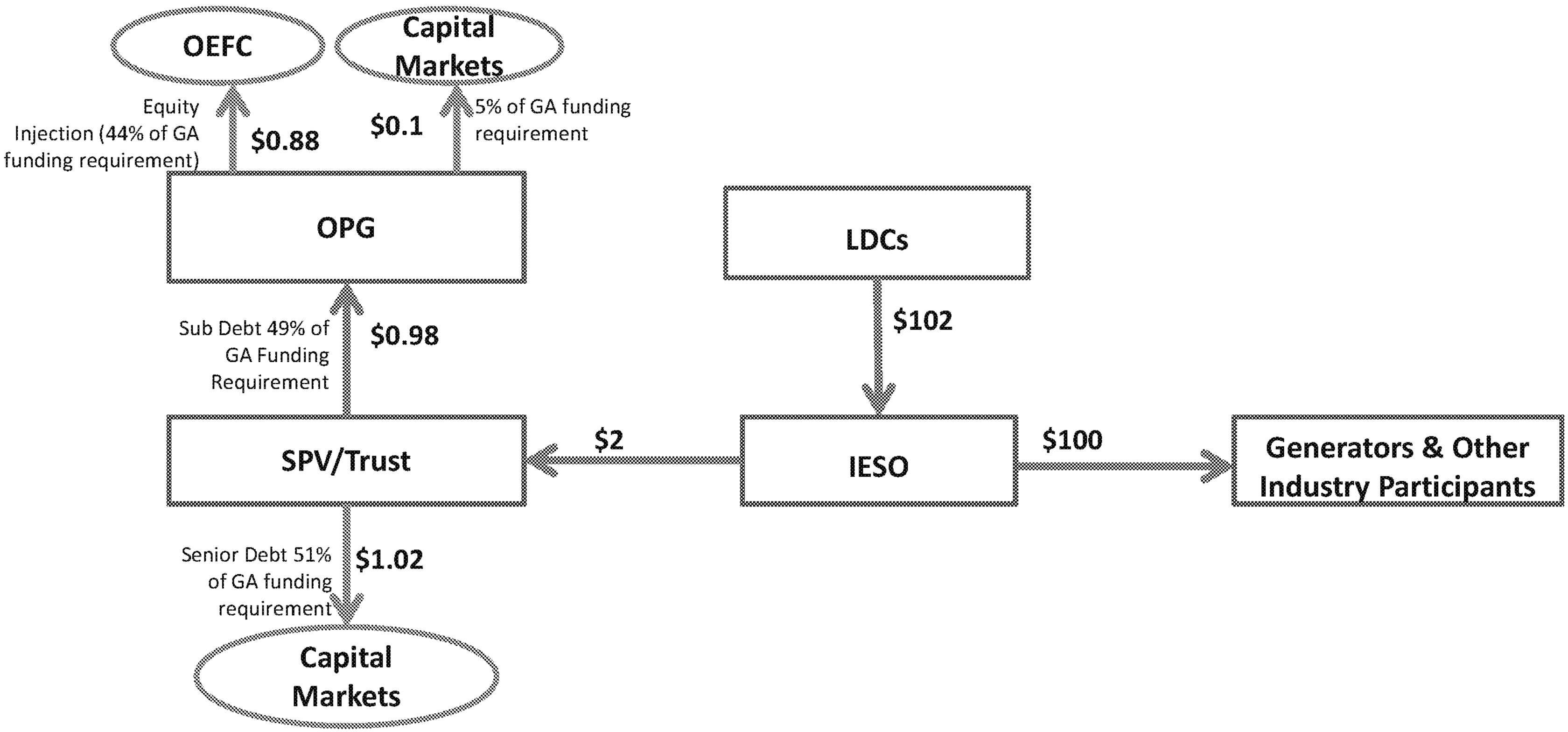
# Cash Flow During GA Deferral Period

- Assume $100 to be Paid to Generators, with a single GA Deferral of $20 during Yr 1-10



# Cash Flow During Deferred GA Payback Period

- Assume $100 to be Paid to Generators, $20 GA deferral to be straight line amortized over Yr 11-30
  - Yr 11 incremental collection from customers $2, including $1 principal plus $1 interest in Yr 11 ($20*5%)



ONTARIO POWER GENERATION

**FOR INFORMATION to the Special Committee of the Board**

**March 17, 2017**

**ONTARIO'S FAIR HYDRO PLAN**

## REASON FOR REPORT

This submission is to provide the Special Committee an overview of the following items:

1. Projected debt accumulation profile under the Province's Fair Hydro Plan.
2. Rating Requirements to Support Financing

## CONCLUSIONS

1) Projected debt accumulation profile
   a) Under the Province's plan, debt increases to approximately $28B in 2027 and is repaid over the following 20 years to 2047.
   b) Residential electricity bills are projected as follows:
      - Bills will be reduced in June 2017 by an average of 25% (including the provincial portion of HST)
      - For the following 4 years, bills will increase at the rate of inflation
      - Beyond 2021, residential bill increases will be limited to 6.5% per year
      - The repayment charge will form approximately 13% of the total customer bill by the late 2027 and reduce to 10% by 2047

2) Rating Requirements to Support Financing
   a) Need for strong legal and structural elements as reflected in legislation, financing order and government pledge (or some form of legislative protection), and mandatory uncapped true-up mechanism
   b) US investors are familiar with the cost recovery bond structure used by US utilities as it is fairly consistent across the states that have implemented this approach

## HIGHLIGHTS

Further details are provided in:

Appendix 1 – Debt Accumulation and Residential Bill Forecast

Appendix 2 – Moody's Rating Methodology Executive Summary
– Credit Rating Assessments Summary of Duke Energy and Long Island Power

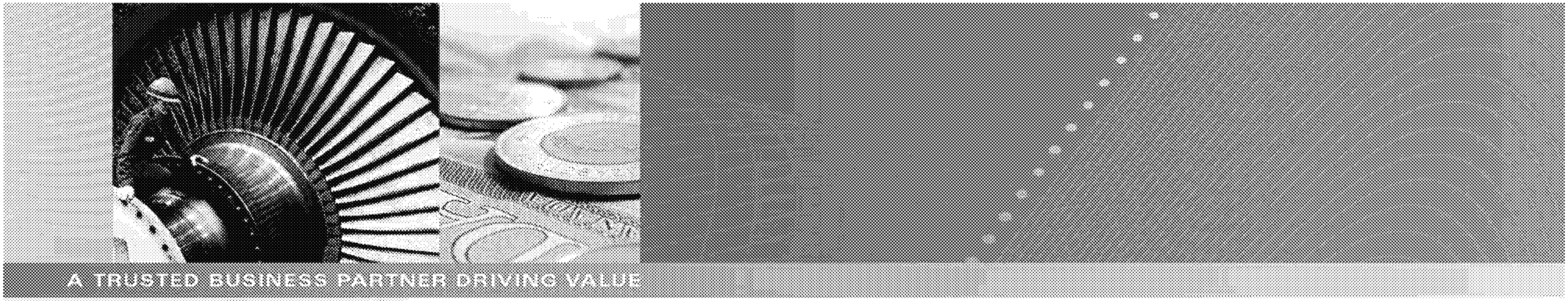
**Submitted by:**

*"Original signed by:"*

Ken Hartwick
Chief Financial Officer & Senior Vice President – Finance

## APPENDICES

1. Debt Accumulation and Residential Bill Forecast
2 Moody's Rating Methodology Executive Summary
Credit Rating Assessments Summary of Duke Energy and Long Island Power




# Fair Hydro Plan – Debt Accumulation and Residential Bill Forecast

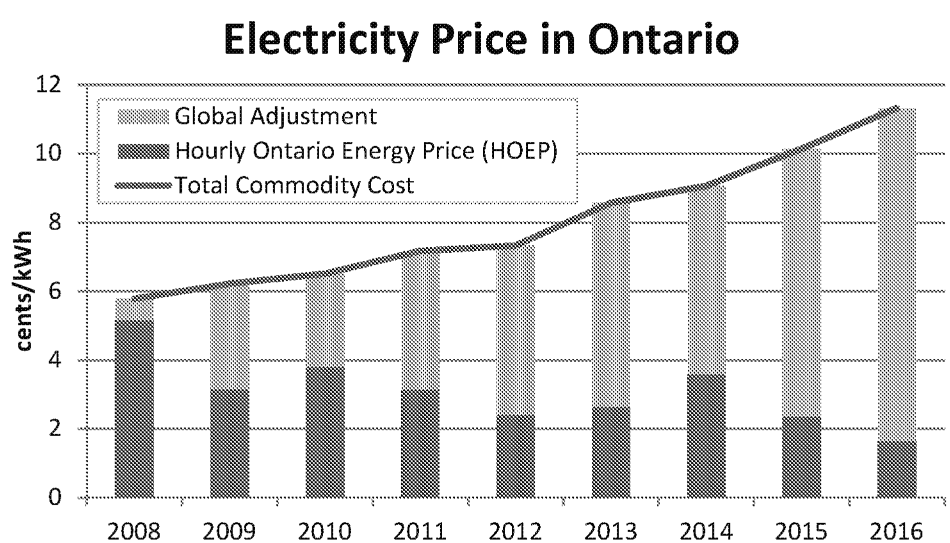
March 17, 2017

*Confidential*

ONTARIO POWER GENERATION

# Global Adjustment

- Nearly all generation in Ontario is paid a fixed price for electricity:
  - OPG's regulated assets
  - IESO contracted assets
  - Non-Utility Generators contracted by the Ontario Electricity Financing Corporation
- Generators are paid the Hourly Ontario Energy Price (HOEP) through the IESO wholesale market.
- The Global Adjustment (GA) charge was created to make up the difference between the market electricity price (HOEP) and the fixed rates paid to contracted/regulated generators. The cost of conservation programs is also recovered via the GA.
- The total commodity cost paid by customers is equal to HOEP + GA.
- In recent years, the total commodity cost of electricity has been increasing as more contracted generation has been added to the system.
- At the same time, HOEP has been falling with natural gas prices and the oversupply of electricity in Ontario.
- This has led to significant growth in the GA.

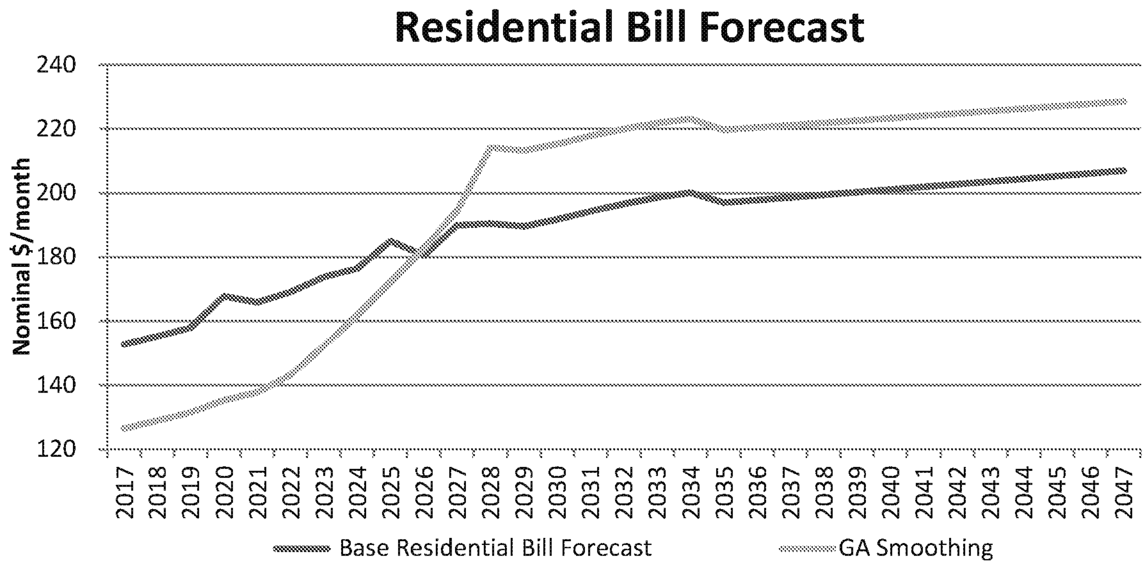


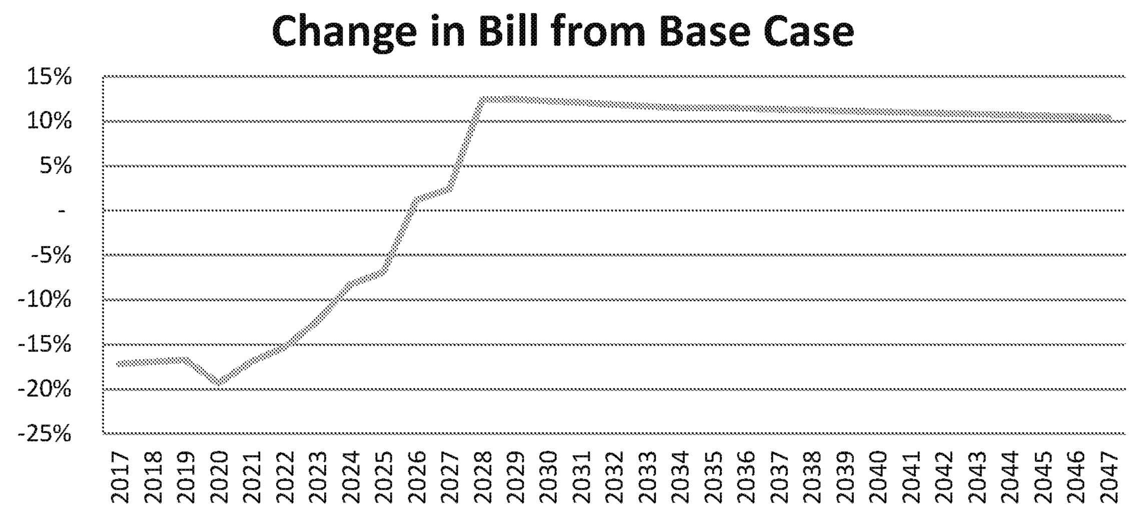



ONTARIO POWER GENERATION

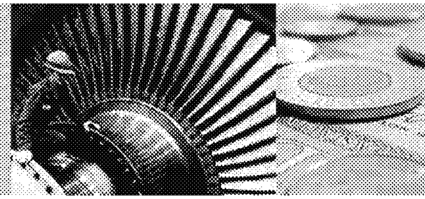
# Ministry Proposal – March 2, 2017

- The Ministry of Energy has proposed to smooth the GA over time arguing that generators contracted for 20 years will actually last for 30 years, so the recovery of their investment should occur over a longer period.
- GA smoothing will be achieved by financing part of the GA charge in the near-term with repayment occurring in the long-term.
- Initially, residential electricity bills will decrease by an average of 25% and then increase at the rate of inflation for the next 4 years.
    - GA smoothing will decrease bills by 16%, with other Ministry of Energy initiatives such as rebating the 8% provincial portion of the HST responsible for the remaining reductions.
- Beyond 2021, residential bill increases will be limited to 6.5% per year leading to the repayment charge peaking at 13% of the total bill.



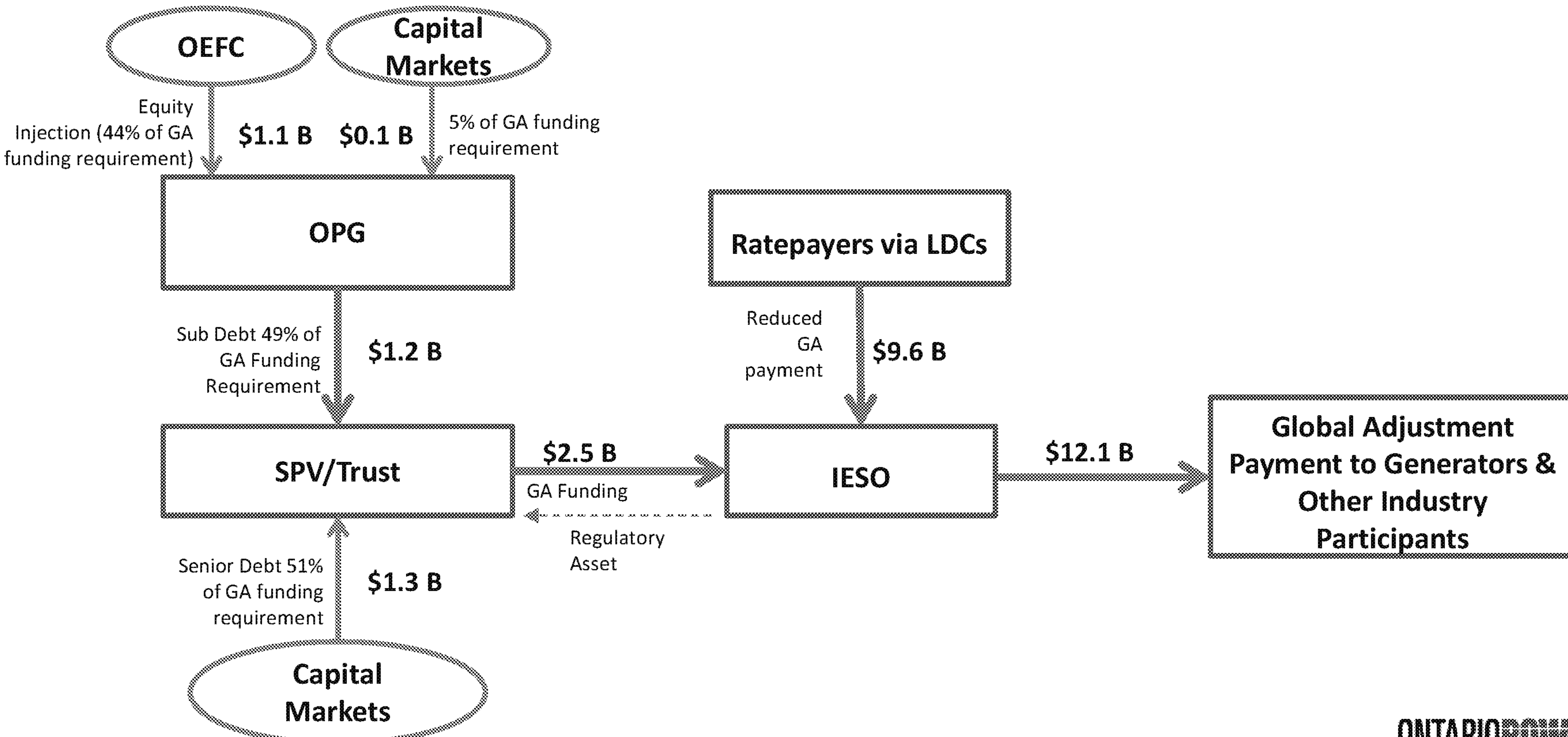

ONTARIO POWER GENERATION

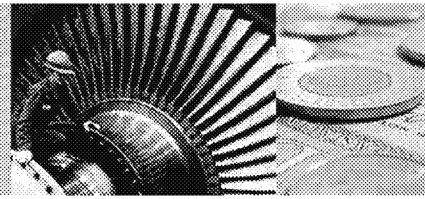


# Financing Structure

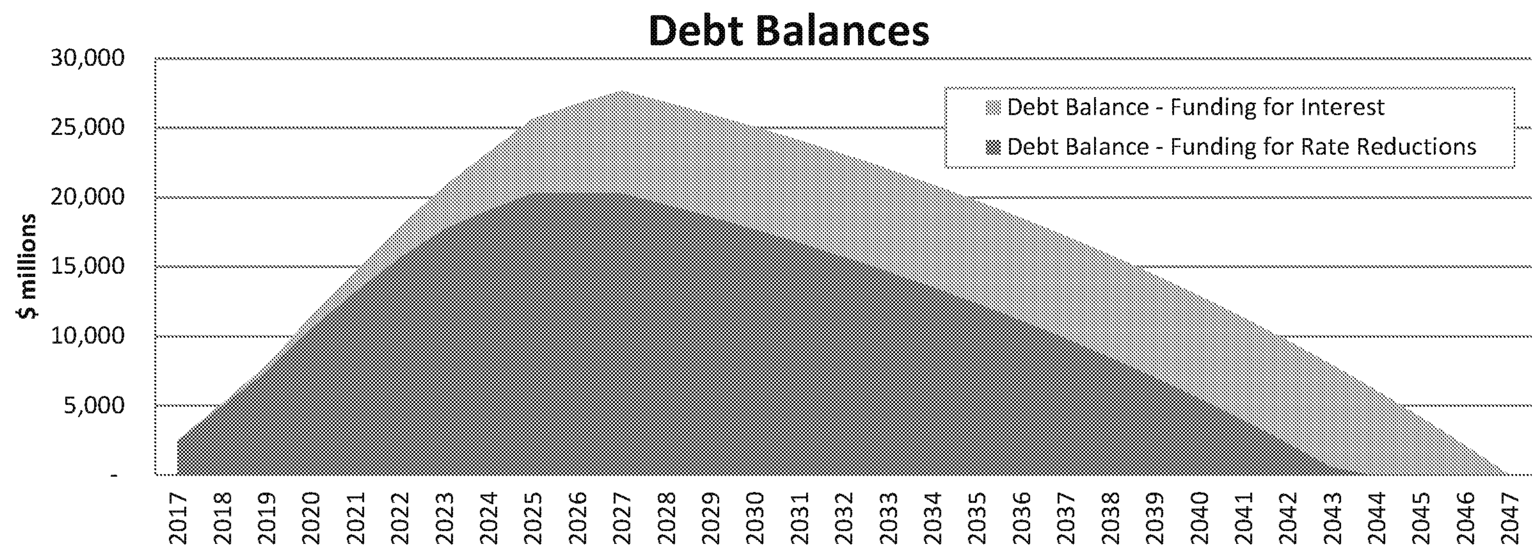
- To implement the smoothing, a trust will be established by OPG. The Trust will purchase a regulatory asset from the IESO and the IESO will use the proceeds to reduce the Global Adjustment.
- The Trust will finance the purchase of the regulatory asset and receive a right to collect funds from ratepayers over the long-term to repay the financing.

## 2017 $2.5 B GA Funding

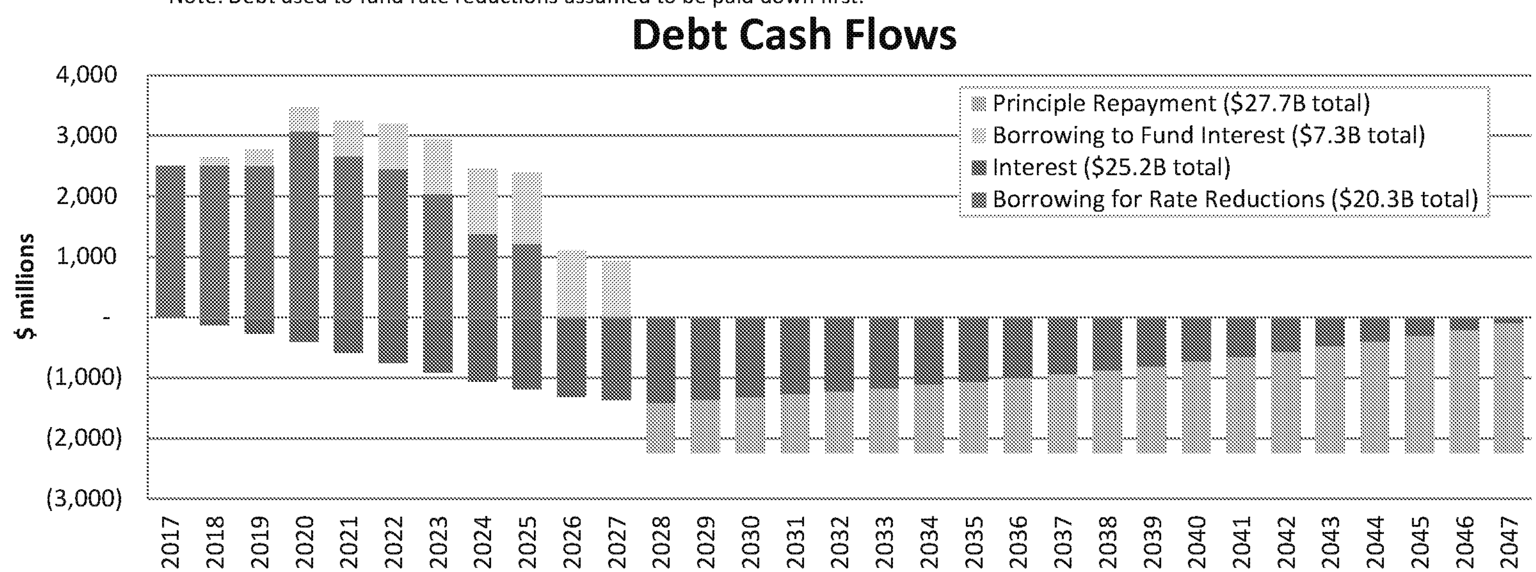




# Debt Cash Flows




Note: Debt used to fund rate reductions assumed to be paid down first.




Note: Assumed interest rate in the Ministry's proposal is 5% compounded monthly.

ONTARIO POWER GENERATION

# *APPENDIX 2*

## *PART 1*

## *Moody's*

## Approach to Rating Securities Backed by Utility Cost Recovery Charges (UCRC)

**Executive Summary from the Rating Methodology**

- A utility cost recovery charge bond is a bond typically issued by a special purpose entity of a utility, or by a special borrowing conduit, to recover specified costs as authorized by special legislation and a specific financing order issued by a public service utility regulatory body.
- The bonds are backed by a property right created by the legislation, which provides the right to impose and collect special charges on customers' monthly electric bills.

The credit quality of the bonds depends on:

- the legal strength of the property right, which in turn depends on the specifics of the related legislation and financing order, and
- the size and economic strength and stability of the ratepayer base against which the costs will be imposed.

On the legal side, Moody's assesses the extent to which the legislation that authorizes the cost recovery charges provides clear procedures for insulating the transaction from claims by other parties and is likely to be able to withstand challenges to rescind or alter the legislation prior to the legal final maturity of the securities. Consequently, the analysis focuses on the extent to which the legislation clearly defines

(1) a property that entitles the owner of such property – the utility, or, in some cases, a public trust or corporation – the right to charge the fee throughout the life of the security in an amount sufficient to make full and timely repayment of principal and interest on the security,
(2) the process the owner of the property must follow to charge the fee,
(3) the irrevocable right of the owner of the property to transfer the fee to a special purpose financing vehicle for securitization purposes,
(4) the type of financing vehicle authorized to issue securities backed by the fees, and
(5) the process to be followed such that the transfer would be viewed as a "true sale" of the rights to the cash flows rather than a pledge of collateral for a financing for transactions that involve the transfer of the property from the utility to the issuer. A true sale would insulate the securitization from a bankruptcy of the utility, protecting securitization investors from potential claims on the cash flows by the utility's creditors.

In addition, Moody's assesses whether the legislation has a government pledge (which is not available under Canadian law) not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

Moody's also examines the likelihood that:

- other potential claimants, such as other creditors of the financing vehicle if it were to become bankrupt or investors in other securities that have been issued by the utility, might make a successful claim on the cash flows of the securitization.
- the charge might be "bypassable," that is, the extent to which current or future customers might be categorized as outside the scope of the applicability of the charge.

Transactions that are strong with respect to each of such characteristics may achieve the highest rating while the impact of weakening any of the attributes would be evaluated on a case-by-case basis.

On the economic side, the Moody's analysis focuses on the likelihood that the charges established by the legislation and accompanying regulations will be sufficient to repay the securitization bonds and on whether the charges might become onerous enough to cause pressure to rescind or alter the charges through future legislative or legal actions. As part of that assessment, Moody's evaluates

(1) possible changes in the size and composition of the customer base against whom the fee is to be charged, incorporating an evaluation of the breadth and diversity of the customer base,
(2) the likely per capita energy usage (in those cases in which the fee charged is based on the usage amount), and

(3) the fee rate, including any mechanism built in by the legislation that enables the fee to be reset over time to offset shortfalls that might develop over the life of the securitization (i.e., the transaction's "true up" mechanism). **Generally the true-up mechanism is in effect the most important credit protection for UCRC transactions, limiting the risk that the cost recovery charges will be insufficient to pay off the bonds**, thereby limiting the need for traditional sources of credit enhancement such as subordination and reserve funds.

In analyzing a transaction's true-up mechanism, Moody's examines how high rates would need to be set under "stressful" future scenarios to fully pay off the bonds, to assess the risk that onerous future rates might cause pressure to overturn or change the legislation and/or regulations establishing the charges. To obtain a high rating, Moody's would expect that even in a stressful environment, such as one in which energy usage declined dramatically, the charge per customer necessary to pay off the bonds would be reasonably low both in absolute terms and as a percentage of the customer's energy bill. e.g 10%

*PART 2*

## *Moody's Credit Rating Assessments*

## *Summary of Duke Energy and Long Island Power*

**SUMMARY RATIONALE**

Why did we use Duke and Long Island?

- No similar precedence in Canada
- Most recent transactions of sufficient size
- Clear rating methodology by Moody's establishing structural requirements to support the rating
- Allows us to identify the Legislative Parameters
    - Need for strong legal and structural elements as reflected in legislation, financing order and state pledge, mandatory uncapped true-up mechanism

Where has it also been done in the US?

- Florida and other states (approximately 18 in total) have passed similar securitization legislation to authorize recoveries by utilities of specified costs, such as hurricane recovery costs, environmental control costs, or costs associated with deregulation of the electricity market, and some of those laws have been challenged by judicial actions or utility commission proceedings. To date, none of those challenges has succeeded.
- Structure including property right supported by legislation and financing orders which are irrevocable and nonbypassable. Property right protected under federal and state constitutions which would require compensation from state if any action impaired the recovery.

Challenges of financing in the Canadian Market

- Nothing similar in Canada
- Federal and Provincial constitutions do not contain similar support to property rights
- Mitigate some of the risks through uncapped true-up mechanism, committed Provincial liquidity support to IESO to handle temporary shortfall in recovery, term of recovery substantially exceeds longest maturity of SPV debt, and true-up mechanism that captures currency, interest rate and duration mismatch between debt and recovery mechanism
- Restrict maturity of debt to no more than 30 years from inception of program

Challenges of taking it to the US markets

- US investors are familiar with existing structure as it is fairly consistent across the states that have implemented this approach
- Canadian structure and protections to debt holders will be different and unfamiliar to investors
- Canadian structure does not provide the same protection to property rights as established under federal and state constitutions

**DESCRIPTION OF BOTH TRANSACTIONS**

| | Duke | Long Island Power | Comments |
|---|---|---|---|
| Description of Sponsor | Duke Energy Corporation is a utility holding company with operations in the Carolinas, Florida, Ohio and Indiana. Duke Energy Florida Project Finance LLC is recovering costs associated with the early retirement of the Crystal River nuclear plant in Florida which ceased operation in 2013. | Long Island Power Authority (LIPA) is a utility with operations in Long Island and parts of New York City. Utility Debt Securitization Authority is recovering costs associated with the retirement of debt of LIPA. | Similarities – special purpose entity established to be "bankruptcy remote" from sponsor to enhance debt holder security and restrict impact of other operations on this entity.<br><br>Differences – all debt for the GA plan is new and will not be replacing existing debt |
| Objective | Recover the remaining capital and early retirement costs along with interest and other financing costs. Intent of structure is to lower the cost to customers of early retirement or abandonment of nuclear generating units by using secure long term financing. | Recover the refinanced principal and early debt retirement costs along with interest and other financing costs. Intent of structure is to provide savings to customers on a net present value basis of the cost of existing utility debt being retired compared to lower cost securitized debt. | Costs recoverable from customers have been incurred. Structure intended to minimize cost to customer of financing and recovering those costs.<br><br>Compares cost of debt for utility financing the debt versus the special purpose vehicle.<br><br>For GA plan the customer savings would be difference in cost of debt between OPG and the SPV. |
| Asset | Ability to impose irrevocable, binding, nonbypassable charge on all future and existing customers provided by a valid and enforceable security interest in property. Amount of charge is sufficient to pay principal, interest and administrative expenses of the financing. Regulator governs the amount and terms for charges through financing orders. However, once bonds issued regulator cannot reduce, impair, postpone, terminate or otherwise adjust the charge other than pursuant to the true-up mechanism. | Ability to impose irrevocable, final, nonbypassable charge on all future and existing customers provided by enforceable restructuring property. Amount of charge is sufficient to pay principal, interest and administrative expenses of the financing. Letter from LIPA to regulator specifies estimated customer savings, estimated ongoing financing cost, initial restructuring cost and final terms of bonds. Designee of regulator issues final and incontestable approval that | Approximately 18 states have enacted similar securitization legislation authorizing the recovery of specified costs.<br><br>Property right protected by federal and state constitutions. Any action by legislature which adversely affects the recovery would require state to pay just compensation. Structure provides protection to debt holders. Similar protection not established in Canada. |

| | Duke | Long Island Power | Comments |
|---|---|---|---|
| | | letter is consistent with financing order. | |
| Size & Term | USD$1.3B<br><br>5 tranches that amortize over 20 years | Total 2016 USD$1.1B through 2 issuances<br><br>Numerous tranches that amortize over 20 years | US market average $1B per year. Recent years up to $2B |
| Credit Strength | Strong legislative structure supported by non-impairment pledge of the state and irrevocable, non-appealable financing order<br><br>Uncapped true-up adjustment mechanism with mandatory semi-annual adjustment to recovery charge<br><br>Low recovery charge of about 2.5% of customer's bill<br><br>Large, stable and diverse ratepayer base<br><br>Strong and experienced servicer (Duke Energy) | Strong legislative structure supported by non-impairment pledge of the state and irrevocable, final, non-appealable financing order<br><br>Uncapped true-up adjustment mechanism with mandatory annual adjustment to recovery charge<br><br>Large, stable and diverse ratepayer base<br><br>Strong and experienced servicer (LIPA) | Legislation may not be viewed as strong given the differences between Canada and US constitutions. |
| Credit Weakness | Challenges to securitization law and financing order viewed as remote<br><br>Collections from customers could fall short of debt servicing requirements – true-up mechanism mitigates those concerns | Challenges to securitization law and financing order viewed as remote<br><br>Collections from customers could fall short of debt servicing requirements – true-up mechanism mitigates those concerns<br><br>High cumulative recovery charge of about 7.8% of customer's bill that also include charges from 3 previous securitizations | Rating agency concerned if recovery charge approaches 10% of customer bill as the larger charge increases potential legal challenges to charge.<br><br>GA scheme could threaten that level and impact the rating and cost of financing |

**March 24, 2017**

**ONTARIO'S FAIR HYDRO PLAN**
**Initial Views on Financing Program**

## REASON FOR REPORT

This submission is to provide the Special Committee with a baseline work program and initial views for financing of the Fair Hydro Trust.

## CONCLUSIONS

1) Multiple competing objectives from participating stakeholders are part of the consideration in developing a balanced financing program that meets the government policy objectives while protecting the interest of OPG

2) The Fair Hydro Trust (Trust) is expected to have alternative funding sources for both short term and long term funds. Short term funds would be available through a bank facility or asset backed commercial paper conduit. Longer term funds would be available through structured finance, project finance or corporate bond markets. The strength of the legislation, views of the rating agencies and marketing efforts to access a broad investor base will impact on the ability to access these funding sources.

3) A pooled approach to repayment rights of the regulatory asset increases flexibility to structure the financing in a way that achieves effective pricing.

## HIGHLIGHTS

Details provided in Appendix 1 – Fair Hydro Trust Financing Program – Initial Views.

**Submitted by:**

*"Original signed by:"*

Ken Hartwick
Chief Financial Officer & Senior Vice President – Finance

## APPENDICES

1. Fair Hydro Trust Financing Program – Initial Views

ONTARIO POWER GENERATION

# Fair Hydro Trust Financing Program
# Initial views

March 24, 2017

# Stakeholder Considerations for Fair Hydro Trust Financing Program

- Investors
  - Credit protection
  - Well defined acceptable program with respect to the treatment of Rate payers
  - Tight covenants
- OPG
  - Appropriate ring fencing and minimal liability exposure
  - Reputational risk
  - Minimize credit rating impact
  - Maximize return on subordinated debt
  - Appropriate compensation for Financing flexibility
- Province (MOE/MOF)
  - Provide support and direction on Trust financing
  - Role in ongoing governance
  - Maximize the deferral impact on rate payers bills in the near term
- Ratepayer
  - Minimize cost of trust financing
  - Smooth impact of recovery in any given year
- IESO
  - Minimize credit risk
  - Flexibility of regulatory asset transaction
- Other considerations
  - Flexibility to unwind the trust

# Baseline Work Program

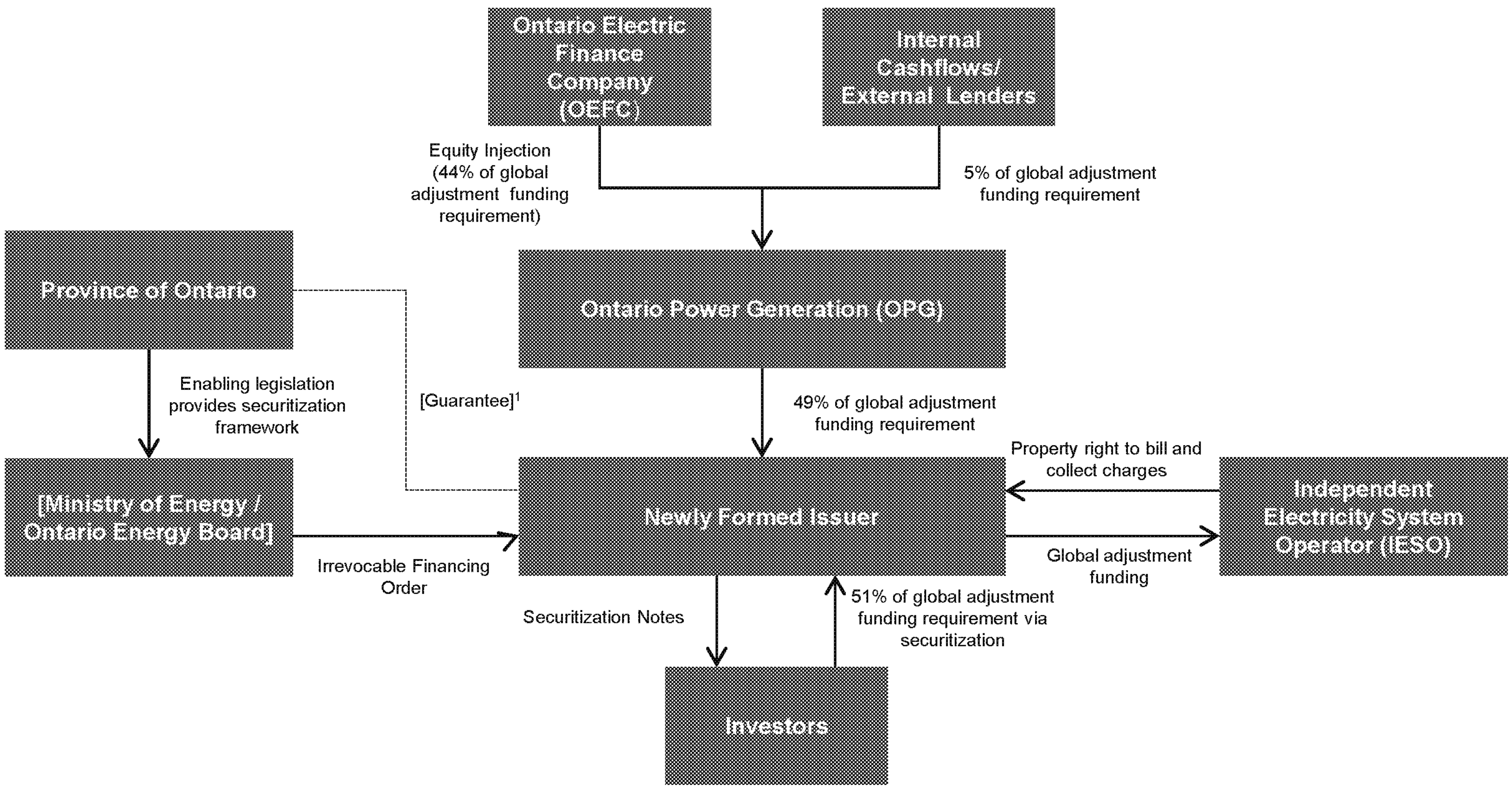
- Key work elements
  - Legislative & Regulatory Framework
  - Financing Strategy/Approach
    - Flexibility to access multiple funding platforms
    - Senior & subdebt optimization
  - Rating Agency
- Key Agreements
  - Term sheet (common key covenants)
  - Master Trust Indenture (Common Borrowing Platform)
  - Declaration of Trust
  - Sales & Servicing Agreement (IESO & Trust)
  - Financing & Management Services Agreement (OPG & Trust)
  - Administration Agreement
  - Equity Subscription agreement
  - Subordinated Debt Agreement

## Funding Alternatives Overview

- There are several potential funding sources that is being consider to structure the overall financing program, including securitization (issued in Canada or the U.S.), bonds, bank financing, and commercial paper (CP)

| | Short Term Funding – "Indicative Range 2-3%" | | | Long Term Funding – "Indicative Range 4 %to 5%" | | |
|---|---|---|---|---|---|---|
| | **1) ABCP Conduit** | **2) Bank** | **3) Commercial Paper** | **4) Canadian Term ABS** | **5) Canadian Bond** | **6) U.S. Term ABS** |
| **Market** | • Canada | • Canada | • Canada | • Canada & U.S. (with 144A wrap) | • Canada | • U.S. |
| **Annual Market Capacity (Largest Issuers)** | • C$2bn+ for a syndicated facility | • Up to C$2.5bn+ syndicated facility | • C$2bn | • Aggregate C$1.5bn+ subject to structure (amortizer, bullet, tenor) | • C$2bn+[1] in fixed rate bullet bonds | • US$4bn+ |
| **Frequency and Potential Size** | • Monthly up to the commitment amount of $1-2bn | • Monthly drawdown with repayment from the capital markets | • Daily postings for an aggregate of C$2.0bn | • 2-3 times annually for an aggregate of C$1.5bn+ | • 2-3 times annually for an aggregate of up to C$2bn | • 2-3 times annually for an aggregate of C$4.0bn+ |
| **Duration** | • Renewable committed warehouses (commitments typically 1-2 years)<br>• Amortizing term-outs (WAL typically <4 years) | • Up to 5 years, annually extendible | • 30 – 90 days | • Bullet bonds up to 10 years are typical<br>• Long tenor capacity to be explored | • Fixed up to 30 years<br>• Flexibility of tenors | • Typically, amortizing assets are match-funded with amortizing debt |
| **Rate** | • Floating | • Floating | • Floating | • Fixed or Floating | • Fixed or Floating | • Fixed |
| **Rating Requirement/ Agencies** | • R-1 (high)/ P-1 ratings from DBRS and Moody's<br>• Conduit RAC[2] | • None required | • Two short term ratings, including one from DBRS<br>• Issuer rating | • AAA ratings from at least two of DBRS, Moody's, S&P or Fitch<br>• Issue rating | • Two ratings from two of DBRS, Moody's or S&P<br>• Issuer or issue rating | • AAA ratings from at least two of S&P, Moody's or Fitch<br>• Issue rating |
| **Hedging Required**[3] | ✗ | ✗ | ✗ | ✗ | ✗ | ✓ |
| **Feasibility** | • High | • High, subject to structure and syndicate composition | • Low - Unsecured<br>• Issuer rating required - unlikely for SPV | • High<br>• Long tenor capacity to be explored | • High<br>• Not tested in Canadian Market | • High/Medium |

[1] Incremental capacity would be available with the addition of a 144A wrap; U.S. market access would require two ratings from Moody's, S&P, or Fitch and would require currency hedging.
[2] Rating Agency Confirmation
[3] Other hedging options (i.e. interest rate swaps on floating rate debt, bond forwards, etc.) can be considered, based on OPG's financing objectives.




*[1] Replacement for constitutional protection "state pledge"; Allows noteholders contract rights in case of province impairment.*

## Next steps:

- Legislation development
- Rating Agency approach – Canadian & US Broad Product Platform
- Determine appropriate level of Provincial support relating to mitigating legislation risk
- Develop appropriate/flexible trust structure
  - Required credit enhancement for senior/external debt
  - Appropriate risk/reward tradeoff for the subordinated debt
- IESO Sales and Servicing agreement
- GA management process over the term of the program

# APPENDIX

# Indicative Master Timeline

Week of: March 13, 20, 27 | April 3, 10, 17, 24 | May 1, 8, 15, 22, 29 | June 5, 12, 19, 26 | July 3, 10, 17, 24, 31 | August 7, 14, 21, 28 | September 4, 11, 18, 25

| A. Administration | Responsibility |
|---|---|
| 1. Kick-off Meetings / Calls | OPG, JL, DC |
| 2. Prepare Initial High-Level Work Plan | JL, OPG |
| 3. Engage Dealers' Counsel | JL |
| 4. Prepare & Execute Dealer Engagement Letter | JL, OPG |

| B. Legislative & Regulatory Framework | |
|---|---|
| 1. Draft Legislation (Fair Hydro Plan Act, "FHPA") | PC, OPG, IC, DC, JL |
| 2. First Reading of FHPA (April 20th) | Province |
| 3. Finalize FHPA (Includes Amendments to Electricity & OEB Acts) | Province |
| 4. OEB Financing Order | PC, OPG, IC, DC, JL |
| 5. Form of Provincial Support (Legislation Protection) | PC, OPG, IC, DC, JL |

| C. Financing Strategy/Approach | |
|---|---|
| 1. Review Financing Options & Determine Optimal Financing Approach | OPG, JL |
| 2. Determine SPV Financing Structure | OPG, IC, DC, JL |
| 3. Determine Financial Model Inputs / Drivers | OPG, JL |
| 4. Develop Base Case Financial Model | OPG |
| 5. Implement Various Funding Options Into Financial Model and Optimize | JL |
| 6. Prepare Base Case Output and Sensitivities for Rating Agencies | OPG, JL |

| D. Rating Agencies | |
|---|---|
| 1. Prepare Simplifed Rating Presentation Outlining Potential Structures | JL |
| 2. Preliminary Discussions with Agencies (Methodology, Structures, etc.) | JL |
| 3. Prepare Formal Rating Agency Presentation | JL, OPG |
| 4. Rating Agency Meetings | RA, OPG, JL |
| 5. Rating Agencies' Undertake Their Analysis | RA |
| 6. Publish Credit Rating (CP or ABCP) | RA |
| 7. Publish Credit Rating / Report (Term Securitization or Bond) | RA |

| E. Key Agreements | |
|---|---|
| 1. Term Sheet (Common Terms & Conditions) | OPG, IC, DC, JL |
| 2. Master Trust Indenture (Common Borrowing Platform) | OPG, IC, DC, JL |
| 3. Declaration of Trust | OPG, IC, DC, JL |
| 4. Master Sales & Services Agreement (IESO & SPV) | PC, OPG, IC, DC, JL |
| 5. Financial Services and Management Agreement (OPG & SPV) | OPG, IC, DC, JL |
| 6. Administration Agreement | OPG, IC, DC, JL |
| 7. Subordinated Debt Agreement | OPG, IC, DC, JL |
| 8. Equity Subscription Agreement with the Province | Province, OPG |

| F. Risk Management | |
|---|---|
| 1. Consider Hedging Options (Rates, Currency, etc.) | OPG, JL |
| 2. Prepare Required Documentation (e.g. ISDA) | OPG, IC, JL |

| G. Short-Term Debt Execution*[1] | |
|---|---|
| 1. Syndicated Bank Credit Facility | OPG, IC, DC, JL |
| 2. Commercial Paper | OPG, IC, DC, JL |
| 3. ABCP Conduit Funding | OPG, IC, DC, JL |
| 4. Price, Closing and Funding | OPG, JL |

*Dependent on funding solution(s) selected

| H. Mid / Long Term Debt Execution[1] | |
|---|---|
| 1. Prepare Deal Documentation (both Canadian & US) | OPG, IC, DC, JL |
| 2. Tactical Decisions (Product, Market, Timing, Size, Tenor) | OPG, JL |
| 3. Marketing Period / Roadshow | OPG, JL |
| 4. Price, Closing and Funding | OPG, JL |

NOTE: This Master Timeline is intended to be a high level summary of the various workstreams illustrated above. Detailed schedules will be developed for each workstream as required.

[1] *Detailed execution timelines will be developed for each funding source selected*

**Legend**

1. OPG - Ontario Power Generation
2. JL - Joint Leads
3. IC - Issuers' Counsel
4. PC - Province's Counsel
5. DC - Dealers' Counsel
6. RA - Rating Agencies

- Complete
- In Process
- Not Started
- Bank Holiday - Shortened Week

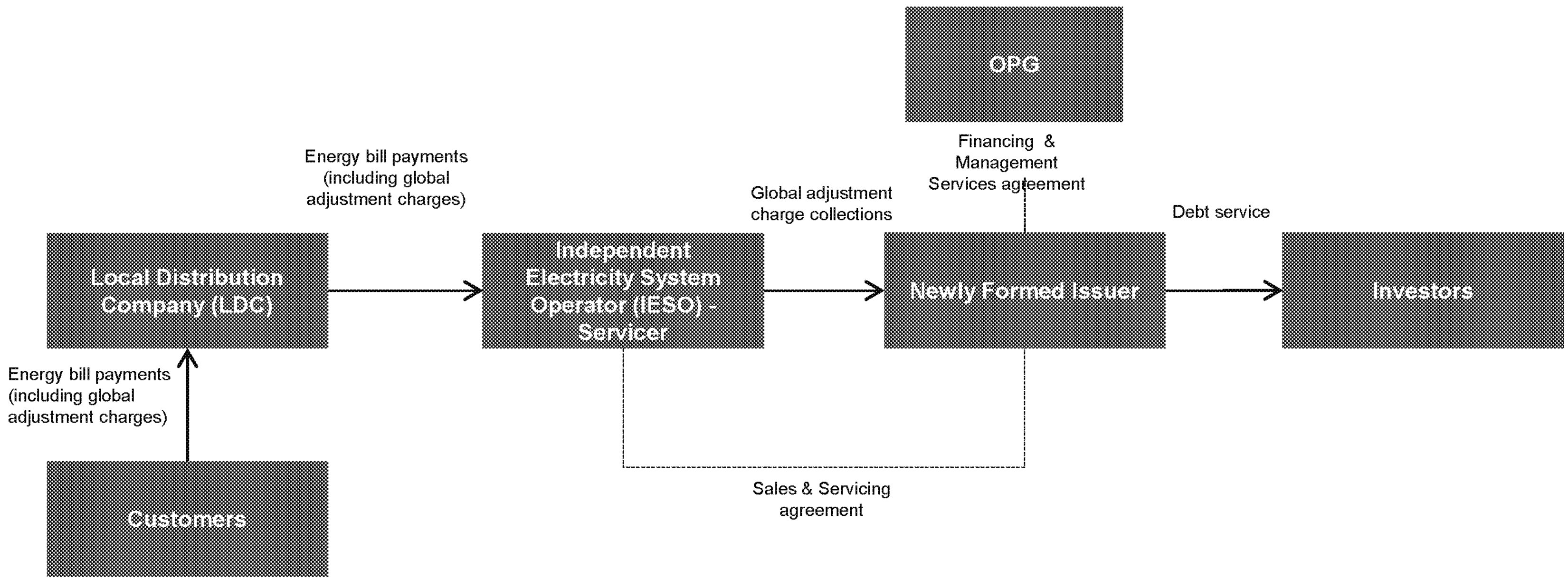
**Bank Holidays**

**Upcoming Canadian Holidays:**

April 14 - Good Friday
May 22 - Victoria Day
July 3 - Canada Day
August 7 - Civic Holiday

**Upcoming U.S. Holidays:**

May 29 - Memorial Day
July 4 - Independence Day
September 4 (Canada & U.S.) - Labour Day


OPG
Financing & Management Services agreement
Energy bill payments (including global adjustment charges)
Global adjustment charge collections
Debt service
Local Distribution Company (LDC)
Independent Electricity System Operator (IESO) - Servicer
Newly Formed Issuer
Investors
Energy bill payments (including global adjustment charges)
Customers
Sales & Servicing agreement

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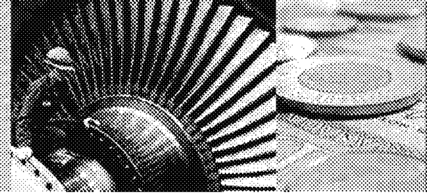

# Outline

- Illustrative Financial Benefits
- Illustrative Qualitative Benefits
- Next Steps

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