From:	Thom, Trevor
To:	Steen Hume (CAB)
Cc:	Mike Manning
Subject:	Accepted: Fw: Review draft OFHP legislation (Steen to attend)

Hi. I am just getting this now for some reason.
Unfortunately Mike Wolff &I are already booked from 9-11AM tomorrow, so will not be able to attend.
I am hopeful others from TDS will be able to make it.
I am free in the afternoon

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From: ASHBOURNE, STEPHEN
To: Scott Nelms (ENERGY)
Cc: Mike Manning
Subject: Catch-up
Date: Monday, April 03, 2017 9:25:33 AM

Hi Scott. Would you have a few minutes this morning to discuss the agenda for the next few days? I understand that TD may have been invited to an Assistant Deputy MOE meeting at noon – if that's correct, it may make sense to have a chat in advance so TD feels up-to-speed. If you have a minute, please call so we can coordinate. Thanks,
Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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From: QP Briefing
To: Mike Manning
Subject: Debt fight! Your Afternoon QP Briefing
Date: Monday, October 03, 2016 5:19:47 PM

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[click.bsftransmit12.com]

Your Afternoon Briefing For

Monday October 3, 2016

The Liberal government and the auditor general are once more in disagreement. This time, the two sides just can't agree on how to value pension assets, which has repercussions for the province's bottom line. Meanwhile, the Liberal government's eight-per-cent electricity bill rebate isn't enough for some voters and the feds have announced their vision of a national carbon price, one that will surpass Ontario's in short order. That and more in your afternoon QP Briefing.

[click.bsftransmit12.com]

HEADLINES

National carbon price to start cheaper, rise faster than that of Ontario's cap-and-trade system[click.bsftransmit12.com]
Cost isn't everything, though; the federal government says provinces who use cap-and-trade systems must have 2030 emissions targets equal to or greater than Canada's, which is 30 per cent below 2005 GHG levels.

SEEN, HEARD, HAPPENING

CAREER OPPORTUNITIES

Director of

Liberals at odds with auditor general over $1.5-billion discrepancy in deficit[click.bsftransmit12.com]
At issue is $10.7-billion worth of jointly-sponsored pension assets.

Ontario to act on housing market 'sooner rather than later,' Wynne says[click.bsftransmit12.com]
"We're going to take action that's appropriate for Ontario," Premier Kathleen Wynne said.

'This rebate is a JOKE': Hydro bill help not enough, committee told[click.bsftransmit12.com]
A stack of emails was waiting for MPPs on the first day of committee hearings into Bill 13, the Ontario Rebate for Electricity Consumers Act, which outlines the 8-per-cent refund.

Question period liveblog[click.bsftransmit12.com]
What was asked in question period on Monday, Oct. 3.

Your morning briefing[click.bsftransmit12.com]
Your morning roundup of ne

[click.bsftransmit12.com]

Policy[click.bsftransmit12.com]

Senior Director, Government and Stakeholder Relations[click.bsftransmit12.com]

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From:	Adam Prokop
To:	Bruno Amara; Salman Qadir; Shajee Kathirgamanathan; Carlos Yep; Mike Manning; John Kim; John Psinas; "Montgomery, Kaitlin (MOF)"; Tobias P. Whitfield (MOF)
Subject:	Equity Financing - Working Group Note
Date:	Tuesday, April 04, 2017 10:38:29 AM
Attachments:	BN - GA Equity Injection Structure v6_Markup2Clean.docx

Greetings,

Please review the attached equity injection note for internal review only. Please keep this within the Ministry/OFA for now.

Kind regards,

Adam Prokop

Economic Specialist

Office: 416-315-6462

adam.prokop@ofina.on.ca

GA FINANCING – EQUITY INJECTION OVERVIEW

This document serves to provide an overview of the implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

OVERVIEW

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.
- OPG will develop a Special Purpose Vehicle (SPV)referred to as "OPG Trust" to purchase the "right to collect" assets from the IESO in return for cash proceeds.
- OPG Trust will be structured to finance 51% of its funding requirements through the capital markets with the remaining 49% being provided by OPG as subordinated debt.
    - The 49% subordinated debt from OPG will be financed through debt from the capital markets (5%) and through equity injections from the Province (44%).
    - Annual payments will be received by OPG Trust for financing costs.
        - Staff Comments: Unclear if these financing costs/annual payments will be received by OPG [TBC: from IESO or ratepayers directly]?
- The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions such as if to be callable, redeemable, etc. [Also see below.]

Commented [JK1]: Check with SIFB or CMD on the right terminology.

Commented [FC2R1]: To me this is part of the terms and conditions

BORROWING

- The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.
    - OPG staff further clarified that this would be facilitated through a new facility and to be put in place by OPG Trust and not any of the existing facilities OPG currently has in place.

Commented [JK3]: Did I get this right?

Commented [FC4]: If this is the case wouldn't they need a minimum amount of equity to be put in the Trust at the onset? I'm assuming OPG nor the Province will be providing a back stop to the Trust.

- Longer term debt will be issued as soon as possible, subject to market timing constraints.

- OPG to retain 3 dealers to advice on the long-term borrowing and financing of the GA.
- The OFA is also expected to retain a dealer to provide due diligence and independent advice for the Province's equity injection [TBC] into OPG and long-term borrowing by OPG Trust [TBC].

- The long term debt issued by OPG Trust may also be callable to buy back the bonds once the financed GA starts to be repaid. [TBC]

Commented [JK5]: I understood OFA's interest was more on how to structure its borrowing than other aspects but open to hearing different view.

Commented [JK6]: Why would OFA's borrowing be different? Carlos mentioned certain features, though would involve premiums?

EQUITY INJECTION MECHANISM

OVERVIEW

- The Province is expected to provide monthly equity injections to OPG
- In return, OPG would issue new shares to the Province at a value of $20 per share.
- These share issuances currently environed to be redeemable by the Province and OPG may also have rights to buy back the shares [TBC].
  - This would provide the Province with a flexible mechanism to redeem its equity investment in OPG, and allow OPG to return to a more suitable capital structure once the GA financing program has subsided.
  - Redeemable terms may include a lock-out period that permits the Province to redeem after a set time period.
  - [TBC] Shares may be considered preferred shares. Unclear whether at redemption these shares will have a non-par value (ie. not $20 per share).

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PROCESS

- OPG Trust would receive the notice to purchase the asset from IESO.
- A notice would be received from OPG by the OFA for 44% of the asset for the equity injection.
- Separately OPG and OPG Trust would take out debt from the capital markets totaling 56% of the IESO asset value.
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

Commented [SQ210]: [TBC whether 5 business days required for OFA to provide payment to OPG or whether 5 business days is for the entire process of OFA->OPG->OPGT].

LEGISLATION AND TIMING

- The proposed timing for the legislation is May, early June.
- It's unclear how these rates would be effective to consumers if the RPP prices are reset on May 1 and November 1 of every year.
    - Furthermore, the RPP prices are announced by the OEB in mid-April and mid-October annually.
    - Unclear on whether the timing for this implementation mechanism would be sufficient for May 1, RPP prices.
- [TBC] TBS would provide an annual allocation, with a three-year program review cycle.

Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

From:	Adam Prokop
To:	Bruno Amara; Salman Qadir; Shajee Kathirgamanathan; Carlos Yep; Mike Manning; John Kim; John Psinas; "Montgomery, Kaitlin (MOF)"; Tobias P. Whitfield (MOF)
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Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

From:	CIBC CM Macro Strategy
Subject:	Expert advisory panel agrees with Ontario in pension accounting issue (CIBC Capital Markets)
Date:	Tuesday, February 14, 2017 1:53:57 PM
Attachments:	Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017).pdf

CIBC Capital Markets
Macro Strategy Research

Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017)

Credit Implications: Potentially positive
Credit Ratings: DBRS AA(Low), Moody's Aa2, S&P A+, Fitch AA-, All outlooks stable

Yesterday, an expert accounting advisory panel engaged by the Province of Ontario to review the province's accounting practices for pension assets released its report. The report sided with the province in concluding that the province's share of the net pension assets of both the Ontario Teachers' Pension Plan (OTPP) and the Ontario Public Sector Employees' Union Pension Plan (OPSEUPP) should be recognized as an asset in Ontario's financial statements. The panel concluded that it should be reported for the following reasons:

- Recognizing the asset will provide a faithful representation of the province's financial position
- The accounting surplus in the plan has a future economic benefit
- The government controls access to that accounting surplus
- The accounting surplus exists as the result of past transactions and events
- It would be misleading not to recognize the province's share of the assets in Public Accounts.

For the full report Click Here[ontario.ca]

The implications of this conclusion is that the province will have more financial flexibility to achieve its financial targets if it chooses to return to the pension accounting treatment it had used in the past. Adopting the Auditor General's treatment has resulted in an upward adjustment to the accumulated deficit as well as higher pension expense in fiscal 2015-16 and in future years. More information about these adjustments is provided below in the "Background" section.

The Auditor General is reviewing the report and has not commented officially. For the Province of Ontario's fiscal 2015-16 results, the Auditor General issued a qualified opinion because, although the statements adopted the Auditor General's pension accounting treatment for fiscal 2015-16, it did not retroactively restate the comparative 2014-15 public accounts and, therefore, by not correcting the error in accounting treatment, it constituted a departure from Public Sector Accounting Standards (PSAS).

At the same time, the preparer of the financial statements (Treasury Board Secretariat) who felt that they were and have always been in compliance with PSAS, signed off on fiscal 2015-16 results, but only following the adoption by the Province of Ontario of the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment").

Background

In our Ontario Talking Points (January 27, 2017) research note we provided the following background information on this issue.

Could you clarify Ontario's course of action given the Auditor General of Ontario's qualified opinion on Pension Accounting?

- Although the pension expense is a non-cash charge, it is still very important to achieving the balanced budget target in Fiscal 2017-18, since Ontario's results are reported based on accrual accounting and not cash.
- The Province has engaged an expert panel of accountants to assess the issue.
- The issue being assessed is whether the Province can record an asset for the jointly sponsored plans under the accounting standards. The Province believes that an asset should be reported.
- The panel will focus on the accounting question, but will also provide advice on how to measure an asset, assuming it concludes that it should be reported. The calculation is sensitive to management's assumptions, including the discount rate which reflects management's best estimate of long-term returns on the assets which is currently at 6.25% and consistent with rates used by most other senior Canadian governments.
- Background – Ontario Public Accounts 2015-16: In Ontario's fall fiscal and economic update,

the government adopted the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment"). The impact of the change resulted in an additional $10.7bln being added to the net debt and accumulated deficit and an increase of $1.5bln to the annual deficit for 2015–16. Consistent with the accounting treatment adopted in the Public Accounts of Ontario 2015–2016, the medium-term fiscal outlook provided reflects a cautious approach to forecasting the projected annual Pension Adjustment. This cautious approach results in an estimated potential impact of $2.2bln in 2016–17, $2.8bln in 2017–18, and $3.7bln in 2018–19 to the annual Pension Adjustment.

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Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017)

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From: Hancock, Jamie W - GCM
To: Mike Manning
Subject: FW: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies
Date: Friday, March 03, 2017 8:32:43 AM

Mike, hi, will you guys be managing this process or can you direct to whom to speak with at OPG?
Regards,
Jamie

Jamie Hancock
Head & Managing Director
Canadian Debt Capital Markets
Bank of America Merrill Lynch
Merrill Lynch Canada Inc.
Desk: 416-369-8159
Cell: 416-564-9427
jamie.hancock@baml.com

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Ontario Forms New Trust to Tap Markets for Hydro Subsidies
2017-03-02 21:18:47.509 GMT

By Maciej Onoszko
(Bloomberg) -- Ontario Power Generation Inc. will set up a special purpose vehicle that will raise funds to help finance subsidies announced Thursday to curb soaring electricity bills in Canada's most-populous province.

Ontario's largest power generation company will manage the new entity for the province and its electricity system operator, known as IESO. The vehicle will tap bond and possibly equity markets for funding, said Chief Executive Officer Jeff Lyash. "We've got the scale to do this, we have got access to debt markets, relationships with credit rating agencies, we have the internal capabilities," Lyash said by phone on Thursday. "We're basically a service provider -- think about it like a trust."

Ontario's plan includes refinancing investments in power generation over longer periods to reduce electricity costs in the short term. The province plans to push back the cost of the so-called global adjustment, which is a charge that covers the costs the power industry has incurred as part of its multi-billion dollar investment in facilities.

It will probably take a few months to set up the trust as the province needs to create the regulatory framework for the changes, Lyash said, adding the vehicle will be run separate from the rest of OPG's business. He declined to say how much money the entity would raise.

The trust will most likely access the bond market, but it could raise equity too, Lyash said, adding final decisions haven't been made.

The immediate reduction in the global adjustment will amount to about C$2.5 billion per year on average over the first 10 years, the province said in a presentation of its proposal on Thursday. The additional financing will add up to C$1.4 billion a year in interest payments.

To contact the reporter on this story:
Maciej Onoszko in Toronto at monoszko@bloomberg.net
To contact the editors responsible for this story:
David Scanlan at dscanlan@bloomberg.net;
Christopher DeReza at cdereza1@bloomberg.net
Jacqueline Thorpe

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From:	Mike Manning
To:	Sarah Harris
Subject:	FW:
Date:	Thursday, April 13, 2017 11:01:54 AM
Attachments:	TD Province of Ontario NDA v2.doc

Hi Sarah:
As we discussed.
Mike

From: Holloway, Harold [mailto:Harold.Holloway@tdsecurities.com]
Sent: Thursday, April 13, 2017 10:18 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Thom, Trevor <Trevor.Thom@tdsecurities.com>
Subject:

Scott,

As discussed yesterday, I attach a Non-Disclosure Agreement relating to the Fair Hydro Plan and GA Deferral Financing. I hope this is helpful. It is a form which TD has used in the past and we are happy to execute it. Please let me know if you have any questions.

Have a great long weekend.

Harold

Harold R. Holloway | Managing Director, Head of Power and Utilities
Investment Banking, Global Energy and Power Group | **TD Securities Inc.**
TD Tower 8th floor, 66 Wellington Street West, Toronto, ON M5K1A2
T: 416 308 9091 | M: 416 270 5096 | F: 416 983 3176
harold.holloway@tdsecurities.com

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NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (the "Agreement") is entered into, and effective from, the ____ day of _____, 20___ by and between The Province of Ontario (the "Province") and TD Securities Inc. ("**TD**"), an Ontario Corporation.

WHEREAS the Province and TD (collectively referred to as the "**Parties**" and each individually as a "**Party**") wish to discuss the Fair Hydro Plan and the associated financings (the "**Transactions**") and wish to clarify the manner in which any Confidential Information of the Province (as hereinafter defined) disclosed in the course of such discussions is to be treated by TD.

NOW THEREFORE, in consideration of the premises and mutual obligations contained herein and for other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), the Parties hereby agree as follows:

1. ***Definition of Confidential Information.*** For the purposes of this Agreement, the term "**Confidential Information**" means any information, knowledge, know-how, data, reports, notes, analyses, studies, interpretations, forecasts, audit reports, customer information, works, computer programs, technology, intellectual property, processes, systems, methodologies, ideas, innovations, business information, compilations, lists and other records concerning the business, financial, commercial, trade, and administrative affairs of the Province which, after the date hereof, may become known to TD, whether the form or manifestation of such Confidential Information is oral, written, electronic, digital, graphic, or any other tangible or intangible form whatsoever.

2. ***Protection and Non-Disclosure of Confidential Information.*** TD covenants and agrees that it shall protect the Confidential Information from harm, loss, theft and unauthorized access and that, except as provided herein, it shall not disclose any Confidential Information to any person or use the Confidential Information for any purpose except to the limited extent necessary to assist the Company in evaluating, negotiating and implementing the Transactions. Without limiting the generality of the foregoing, TD shall use at least the same degree of care, but no less than reasonable care, to avoid unauthorized disclosure or use of the Confidential Information as it employs in respect of its own Confidential Information of like importance. Without the prior consent of the other Party and except as otherwise provided herein, neither Party will, and each Party will direct its respective Representatives not to, disclose to any other person: (i) the existence and content of this Agreement; and (ii) the fact that discussions are taking place between the Parties concerning the Transactions.

3. ***Disclosure to Representatives.*** Notwithstanding section 2, TD may disclose the Confidential Information to those of its and its parent's directors, officers, employees, agents, contractors, consultants and legal, financial and other advisors (collectively, "**Representatives**") who need to know the Confidential Information for the purposes of assisting the Company in evaluating, negotiating and implementing the Transactions, provided that such Representatives are advised of the confidential nature of the Confidential Information. TD shall be responsible for any violation of this Agreement by its Representatives.

4. ***Exceptions to Non-Disclosure.*** Notwithstanding any other provisions of this Agreement, the obligations of TD under section 2 of this Agreement shall not apply, or will cease to apply, as the case may be, to Confidential Information if and to the extent that: (i) it was previously known to or in the possession of TD or its Representatives prior to receipt from the

Province; (ii) it is independently developed by or on behalf of TD or its Representatives without reference to the Confidential Information; (iii) it is or becomes publicly available and/or generally known in the industry, other than through a breach of this Agreement; (iv) it is disclosed to TD or its Representatives by a source other than the Province, provided such source is not known by TD or its Representatives to be bound by any contractual, legal or fiduciary obligation of confidentiality to the Province with respect to the information; (v) it is or has been excluded, in writing, from the scope of this Agreement by the Province (but only to the extent of and subject to any terms set out in such written exclusion); or (vi) TD and/or any of its Representatives is required or requested by any court, administrative agency, governmental or regulatory (including self-regulatory) body, stock exchange or securities commission of competent jurisdiction or under any applicable legal process, law, rule, regulation, subpoena, order or decree (collectively, "**Law**") to disclose, reveal or surrender any of the Confidential Information or details regarding the Transactions.

5. ***Required Disclosure.*** With respect to section 4(vi) above, if TD and/or any of its Representatives is required or requested to disclose any of the Confidential Information, TD shall, and if applicable shall direct its Representatives to, if permitted by applicable Law, notify the Province in writing promptly so that the Province may seek, at its own expense, a protective order or other appropriate remedy. In the absence of a protective order or other appropriate remedy, TD agrees to, and if applicable agrees to direct its Representatives to, furnish only that portion of the Confidential Information which is legally required (in the opinion of TD's counsel) and to provide reasonable cooperation to the Province in its effort, at its own expense, to obtain assurance, from the person to whom disclosure must be made, that the Confidential Information will be treated in a manner consistent with section 2 of this Agreement. The prohibitions and obligations in this Agreement related to the disclosure of Confidential Information and details regarding the Transactions shall not apply to any disclosure or proposed disclosure to a regulator having authority over TD or its parent.

6. ***Return or Destruction of Confidential Information.*** The Confidential Information (including any changes, revisions, improvements or modifications thereto) shall remain the Province's property. Upon the request of the Province, TD shall, and shall direct its Representatives to, return or destroy (at TD's option) all of the Confidential Information and provide the Province with written certification of compliance with this section 6. Notwithstanding the foregoing, TD and its Representatives, as applicable, may retain copies of Confidential Information: (i) that TD or its Representatives are required to retain for regulatory, legal and compliance purposes; (ii) that are automatically retained as part of a computer back-up, recovery or similar archival or disaster recovery system; or (iii) that was provided to TD's or its parent's board of directors or any committee thereof.

7. ***Equitable Relief.*** TD acknowledges and agrees that any breach or non-performance by TD of its obligations and duties in connection with this Agreement may cause the Province immediate and irreparable harm for which damages may not be an adequate remedy. Accordingly, TD agrees that the Province may have the right, in addition to its other rights and remedies, to seek equitable relief for any violation of this Agreement.

8. ***No Warranty.*** TD acknowledges and agrees that all Confidential Information is provided on an "as is" basis without any representation, warranty or covenant, express or implied, as to the origin, authorship, usefulness, reliability, fitness for a particular purpose, merchantability, accuracy, timeliness or completeness of any of the Confidential Information.

9. ***No Other Relationships or Agreements.*** The Parties agree that this Agreement is for the purposes of protecting the Confidential Information only and creates no joint venture or partnership or any agency relationship between any of them. The Parties agree that this Agreement does not in any manner whatsoever obligate them to enter into any further agreements or transactions.

10. ***General.*** This Agreement is governed by the laws of the Province of Ontario without regard to its rules on conflicts of law. Neither Party may assign its rights or obligations under this Agreement. No modification or waiver of any provision of this Agreement shall be effective unless in writing and signed by the Party sought to be bound. The headings in this Agreement are for convenience of reference only, are not part of this Agreement, and do not affect its interpretation. This Agreement is the entire agreement between the Parties on non-disclosure of confidential information and supersedes all prior representations and agreements between the Parties on that subject. This Agreement shall expire one year from the date hereof.

AGREED:

THE PROVINCE OF ONTARIO	**TD SECURITIES INC.**
By:_____	By:_____
Name:_____	Name: Trevor Thom
Title:_____	Title: Managing Director and Group Head, Government Finance

From:	Linda Smith
To:	John Kim
Cc:	Mike Manning
Subject:	FW: Amendments for flexibility in OEFC agreement
Date:	Tuesday, January 31, 2017 4:02:26 PM
Attachments:	2016.03.31 - OPG Subsidiary Organizational Chart.pdf

Hi John

OPG is asking about having the ability to issue debt from their subsidiaries going forward. Ken gave a bit of an explanation below.

From: RYFA Ken -TREASURY [mailto:ken.ryfa@opg.com]
Sent: Tuesday, January 31, 2017 1:58 PM
To: Linda Smith
Subject: RE: Amendments for flexibility in OEFC agreement

Linda,

OK, John will talk to Mike.

I left you a message about item 4 below as I wasn't sure exactly what you mean.

For your information I've attached an OPG subsidiary organization chart – look on the 2nd page. We already have a number of separate legal entities with both assets and debt – UMH Energy Partnership, Lower Mattagami Energy Limited Partnership, PSS Generating Station LP all have assets and corresponding debt (project financing) within the partnership entity. Both the assets and the debt roll up to OPG consolidated financial statements.

The structure that we are considering would work similarly. Below is an illustration of how the structure is expected to work which may answer your question:

Using regulated hydro as an example – call it Reg Hydro Co

OPG owns 100% of Reg Hydro Co

Regulated hydro assets currently in OPG are transferred to Reg Hydro Co

Would likely capitalize Reg Hydro Co with a combination of debt and equity – existing OPG debt with OEFC would stay in OPG but we would likely set up inter-corporate debt between OPG and Reg Hydro Co to reflect the rates and maturity profile of OPG debt with OEFC. However, when we consolidate Reg Hydro Co with OPG Inc. the inter-corporate debt would be eliminated leaving just the existing OPG debt with OEFC.

New debt incurred by Reg Hydro Co would be an obligation of Reg Hydro Co

Since Reg Hydro Co is owned 100% by OPG then the financial position of Reg Hydro Co will be captured in OPG consolidated results – e.g. inter-corporate debt would be eliminated on consolidation and Debt incurred by Reg Hydro Co would show up as debt in OPG consolidated.

Does this answer your question?

Let me think about the best efforts wording.

Thanks,

Ken

From: Linda Smith [mailto:Linda.Smith@ofina.on.ca]
Sent: Tuesday, January 31, 2017 9:52 AM
To: RYFA Ken -TREASURY
Subject: RE: Amendments for flexibility in OEFC agreement

Hi. My comments:

3. This is probably a discussion between John and Mike.

4. Currently, the charge for the loan is on the corporate balance sheet. How does this change in

what you are suggesting? Once I have that information, I will speak to our policy people.
Other item – I would suggest using the words "best efforts to set the rate between 10 and 11 am"

From: RYFA Ken -TREASURY [mailto:ken.ryfa@opg.com]
Sent: Monday, January 30, 2017 6:37 PM
To: Linda Smith <Linda.Smith@ofina.on.ca>
Subject: Amendments for flexibility in OEFC agreement

Linda,
Discussion below is for amendments to the overall credit agreement. The proposed February 2017 draw would be done within the existing agreement with OEFC waiver on the term limit.
Amendments that OEFC is OK with:

1. Change from quarterly to monthly draw
2. Notice period for all draws – 10 business days

Amendment to be discussed with OEFC:

3. Term – our objective is to extend term of OPG's debt so we need very long term notes. Our proposal is –
    a. > 30 years (intent is to do 40 to 50 years) – maximum individual issue $250 million; maximum annual issue $500 million
    b. <= 30 years – amount of annual facility less amount issued under a)

4. Debt borrowed from OEFC by a subsidiary – understood that OEFC needs the entity to be set up but if the entities were established is this something that OEFC would consider?

Let me know whether the OEFC would consider these amendments.
Other items:
Process for setting the base rate – since the rate is generally set by 10 am what if we set bounds around the timing such as 10 am +/- 1 hour. If you need to go outside this range then you would inform us so that we understand the reason for the delay. If the reason is market volatility or difficulty in pricing the requested term then we would have the ability to delay pricing by 1 day and re-evaluate the next day. Thoughts?
Thanks,
Ken

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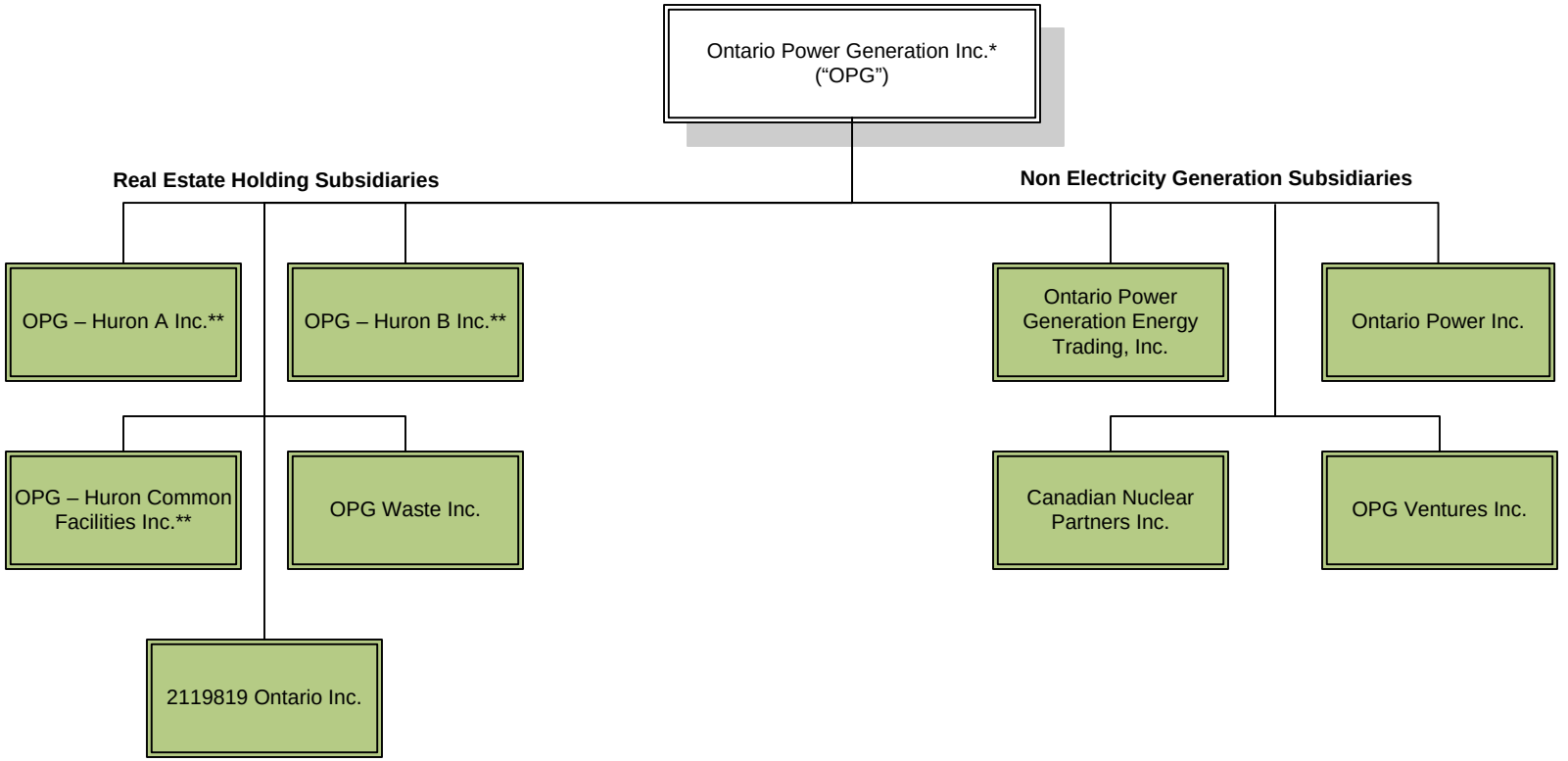
ONTARIO POWER GENERATION ORGANIZATION CHART



Legend:

*** Unless otherwise stated, voting shares of subsidiary corporations are owned 100% by OPG and unless otherwise stated are Ontario corporations**

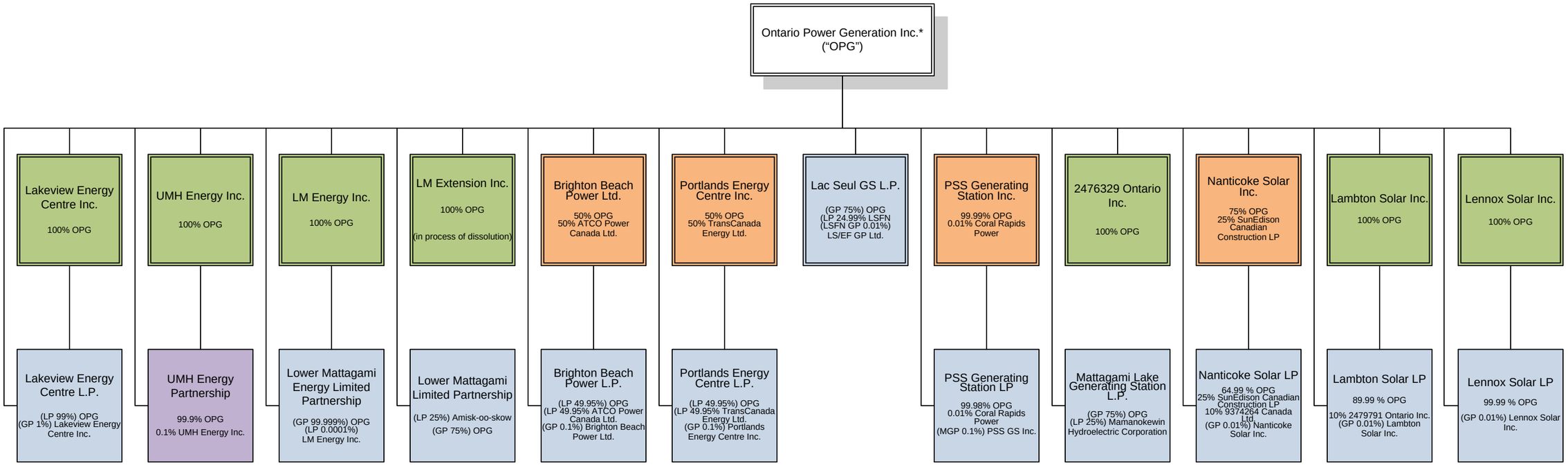
**** Assets are leased to OPG who in turn subleased the assets to Bruce Power Limited Partnership**

- **Limited Partnerships**
- **Partnerships**
- **Entities wholly owned by OPG**
- **Entities not wholly owned by OPG**

If there are any discrepancies between this chart and the corporate minute books, the corporate minute books are the official record of information.

Updated March 31, 2016

ONTARIO POWER GENERATION ORGANIZATION CHART



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If there are any discrepancies between this chart and the corporate minute books, the corporate minute books are the official record of information.

Updated March 31, 2016

From: Gadi Mayman
To: Mike Manning
Cc: Lynsey Wynberg
Subject: FW: Call with OPG
Date: Thursday, February 16, 2017 10:02:27 AM

I just noticed that you weren't on this email chain.

-----Original Message-----
From: Gadi Mayman
Sent: Thursday, February 16, 2017 9:36 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Subject: RE: Call with OPG

That's a fascinating suggestion if it works on leaving OPG as a GBE, as it dispenses with the need for a complex equity structure and it, with the recycling of the spread, ends up with the ratepayers effectively getting the lowest possible rate while leaving us fiscally whole.

Gadi

-----Original Message-----
From: Ronald Kwan
Sent: Thursday, February 16, 2017 9:30 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: RE: Call with OPG

Hi Scott,

Just brainstorming here, but I'm thinking that on the nuclear funds, the Province provides some risk sharing, but not all, and OPG is still a GBE, so I think it would be interesting to see where the advice might be on what share of external borrowing is advised on the appropriate share to mitigate the risk.

Also, has there been a concern expressed on GBE status if all the financing is done at the government's rate? Might that raise a concern that OPG is not fully self-sustaining due to an implicit subsidy? If a commercial spread is charged by OEFC, perhaps informed as is currently by a survey or a tranche of third-party lending, would that help make the GBE case? I'd note as well that it seems possible to me that OEFC could have its objects looked at and be directed to recycle the spread to the IESO to benefit ratepayers, as OEFC does now on the IEI for amounts equal to the related DRC revenues.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: February-16-17 08:39
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: Re: Call with OPG

Hi Ron,

I think OPG is focusing on the $33B option for now. Possible that capital structure would change at smaller financing levels.

Why all outside borrowing: as I have heard OPG explain it, there are several accounting tests they are working through with their external auditors and with OPCD, in order to consolidate the Trust to OPG's financials. This is important in order to preserve the intangible asset upon consolidation to the Province. There is no bright line test for this, so it is a build up of a number of factors. One important test is whether they are responsible for losses and benefit from any gains from the trust. If it looks like the Province is providing a back stop this may not work.

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Ronald Kwan
Sent: Thursday, February 16, 2017 8:07 AM
To: Kandeepan, Ken (OFA)
Cc: Nelms, Scott (ENERGY); Mayman, Gadi (OFA)
Subject: Re: Call with OPG

Why does all of the debt have to be external borrowing?

Ron

> On Feb 16, 2017, at 7:15 AM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> That was not discussed at my call, having said that the greater the equity injection, up to 49% of course, the lesser the amount to be borrowed from outside lenders.
>
> Perhaps Scott has at additional info
>
> Thanks
>
> Ken k
>
>> On Feb 16, 2017, at 5:06 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>
>> Hi Scott, Ken,
>>
>> Just for my understanding, is OPG putting forward the 49% regardless of the size of the borrowing?
>>
>> Would it be potentially lower if the total debt to be borrowed were under 20 vs almost 33B?
>>
>> Ron
>>
>>> On Feb 15, 2017, at 10:50 PM, Nelms, Scott (ENERGY) <Scott.Nelms@ontario.ca> wrote:
>>>
>>> Hi,
>>>
>>> I circled back with OPG for clarity. Here is the latest on the model, as explained to me:
>>>
>>> - province provides 49 percent equity infusion to OPG (current OPG)
>>> - OPG lends to Trust at 5 percent
>>> - this enables OPG trust to borrow remaining amount from external sources
>>> - OPG Trust recovers principle and interest sufficient to cover OPG and 3rd party loans, from ratepayers per schedule
>>> - OPG Trust repays OPG and OPG books interest revenue which is consolidated to the Province, offsetting incremental IOD costs (with some potential timing impacts)
>>>
>>> Details are still being worked through, but this appears to be the concept.

>>>
>>> Scott
>>>
>>> Sent from my BlackBerry 10 smartphone on the Rogers network.
>>> Original Message
>>> From: Ken Kandeepan
>>> Sent: Wednesday, February 15, 2017 10:26 PM
>>> To: Kwan, Ronald (OFA)
>>> Cc: Mayman, Gadi (OFA); Nelms, Scott (ENERGY); Thompson, Scott (MOF); McLean, David (MOF); Wynberg, Lynsey (OFA); Kennedy, Nancy (MOF)
>>> Subject: Re: Call with OPG
>>>
>>>
>>> On your last point, not really. If the province borrows and used the proceeds to make a loan the interest rate on the loan should be equal or greater than its cost of debt. Otherwise as you point out an upfront loss is triggered.
>>>
>>> My understanding of the accounting rules is that such is not the case for an equity injection where the expected return, if any, need not be directly linked to the cost of the Province's debt.
>>>
>>> Having said it goes back to Gadi's point that OPG provides the province with an ROE which is either recovered from the ratepayers each year hence reducing the GA smoothing benefit or recovered later. In other words ratepayer pays now or later.
>>>
>>> Of course if no ROE then the Province bears the fiscal burden of the interest for the debt to fund the equity injunction.
>>>
>>> Thanks
>>>
>>> Ken k
>>>
>>>
>>>
>>> Thanks
>>>
>>> Ken
>>>
>>>> On Feb 15, 2017, at 9:43 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>>>
>>>> Hi Gadi,
>>>>
>>>> I agree on all that. The more complicated the structure, the harder it will be to explain and the more subject to complaints and misinformation, innocent or not.
>>>>
>>>> Technically, on the government's equity, covering its debt cost to finance the equity makes perfect sense. That said, there are still people asking why the rate regulated OPG ROE can't be zero, forgetting that the Province still has to service the debt it took on to acquire the equity.
>>>>
>>>> The GA situation will be that much worse to explain.
>>>>
>>>> And, as you note, the third party debt cost would be even harder to explain, and some ratepayers might say they'd rather pay now than pay later with interest.
>>>>
>>>> You raise the notion of the Province offsetting the external debt cost with a lower cost of equity on its 49%. That would be a very hard one to explain, and I think there'd have to be an accounting analysis on that -- aside from the annual "loss" on the equity, would there need to be an upfront write down or provision expense?
>>>>
>>>> Ron

>>>>
>>>>> On Feb 15, 2017, at 9:25 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
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>>>>> Original Message
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>>>>> Sent: Wednesday, February 15, 2017 8:59 PM
>>>>> To: Gadi Mayman; Scott Thompson (CAB)
>>>>> Cc: David McLean (MOF); Ronald Kwan; Ken Kandeepan; Lynsey Wynberg; Nancy Kennedy (MOHLTC)
>>>>> Subject: Re: Call with OPG
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>>>>> Cc: McLean, David (MOF); Kwan, Ronald (OFA); Kandeepan, Ken (OFA); Wynberg, Lynsey (OFA); Kennedy, Nancy (MOF)
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>>>>> Happy to discuss further at your convenience.
>>>>>
>>>>> Gadi
>>>>>
>>>>>
>>>>>
>>>>> From: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
>>>>> Sent: Wednesday, February 15, 2017 6:09 PM
>>>>> To: Gadi Mayman
>>>>> Cc: Lynsey Wynberg; 'Veinot, Cindy (TBS)'; Ronald Kwan

>>>>> Subject: FW: Call with OPG
>>>>>
>>>>>
>>>>> Hi Gadi
>>>>>
>>>>> As discussed pls find a quick summary of our call with OPG. I understand that you will be passing this on to Scott. Cindy, you may wish to so to Helen as well.
>>>>>
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>>>>> As requested by OPG, Cindy and I just finished a conference call with them. OPG is of the opinion that OEFC lending the full amount to either OPG or the Trust will seriously jeopardize the OPG's GBE status.
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>>>>> In order to maintain the status they propose;
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>>>>> That funding from the Province be limited to 49% of the amount required by the Trust and be in the form of an equity injection from the Province. An equity injunction means that the Province's net debt is not impacted since the increase in total debt is offset by an equivalent increase in the investment in OPG.
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>>>>> I indicated to John that I will run this by you and get back to him tomorrow, but given the possible fiscal impact, not sure how doable this is.
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>>>>>
>>>>> _____
>>>>>
>>>>> This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

From: Gadi Mayman
To: Mike Manning
Cc: Lynsey Wynberg
Subject: FW: Call with OPG
Date: Thursday, February 16, 2017 10:02:27 AM

I just noticed that you weren't on this email chain.

-----Original Message-----
From: Gadi Mayman
Sent: Thursday, February 16, 2017 9:36 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Subject: RE: Call with OPG

That's a fascinating suggestion if it works on leaving OPG as a GBE, as it dispenses with the need for a complex equity structure and it, with the recycling of the spread, ends up with the ratepayers effectively getting the lowest possible rate while leaving us fiscally whole.

Gadi

-----Original Message-----
From: Ronald Kwan
Sent: Thursday, February 16, 2017 9:30 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: RE: Call with OPG

Hi Scott,

Just brainstorming here, but I'm thinking that on the nuclear funds, the Province provides some risk sharing, but not all, and OPG is still a GBE, so I think it would be interesting to see where the advice might be on what share of external borrowing is advised on the appropriate share to mitigate the risk.

Also, has there been a concern expressed on GBE status if all the financing is done at the government's rate? Might that raise a concern that OPG is not fully self-sustaining due to an implicit subsidy? If a commercial spread is charged by OEFC, perhaps informed as is currently by a survey or a tranche of third-party lending, would that help make the GBE case? I'd note as well that it seems possible to me that OEFC could have its objects looked at and be directed to recycle the spread to the IESO to benefit ratepayers, as OEFC does now on the IEI for amounts equal to the related DRC revenues.

Ron

-----Original Message-----
From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: February-16-17 08:39
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: Re: Call with OPG

Hi Ron,

I think OPG is focusing on the $33B option for now. Possible that capital structure would change at smaller financing levels.

Why all outside borrowing: as I have heard OPG explain it, there are several accounting tests they are working through with their external auditors and with OPCD, in order to consolidate the Trust to OPG's financials. This is important in order to preserve the intangible asset upon consolidation to the Province. There is no bright line test for this, so it is a build up of a number of factors. One important test is whether they are responsible for losses and benefit from any gains from the trust. If it looks like the Province is providing a back stop this may not work.

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Ronald Kwan
Sent: Thursday, February 16, 2017 8:07 AM
To: Kandeepan, Ken (OFA)
Cc: Nelms, Scott (ENERGY); Mayman, Gadi (OFA)
Subject: Re: Call with OPG

Why does all of the debt have to be external borrowing?

Ron

> On Feb 16, 2017, at 7:15 AM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> That was not discussed at my call, having said that the greater the equity injection, up to 49% of course, the lesser the amount to be borrowed from outside lenders.
>
> Perhaps Scott has at additional info
>
> Thanks
>
> Ken k
>
>> On Feb 16, 2017, at 5:06 AM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>
>> Hi Scott, Ken,
>>
>> Just for my understanding, is OPG putting forward the 49% regardless of the size of the borrowing?
>>
>> Would it be potentially lower if the total debt to be borrowed were under 20 vs almost 33B?
>>
>> Ron
>>
>>> On Feb 15, 2017, at 10:50 PM, Nelms, Scott (ENERGY) <Scott.Nelms@ontario.ca> wrote:
>>>
>>> Hi,
>>>
>>> I circled back with OPG for clarity. Here is the latest on the model, as explained to me:
>>>
>>> - province provides 49 percent equity infusion to OPG (current OPG)
>>> - OPG lends to Trust at 5 percent
>>> - this enables OPG trust to borrow remaining amount from external sources
>>> - OPG Trust recovers principle and interest sufficient to cover OPG and 3rd party loans, from ratepayers per schedule
>>> - OPG Trust repays OPG and OPG books interest revenue which is consolidated to the Province, offsetting incremental IOD costs (with some potential timing impacts)
>>>
>>> Details are still being worked through, but this appears to be the concept.

>>>
>>> Scott
>>>
>>> Sent from my BlackBerry 10 smartphone on the Rogers network.
>>> Original Message
>>> From: Ken Kandeepan
>>> Sent: Wednesday, February 15, 2017 10:26 PM
>>> To: Kwan, Ronald (OFA)
>>> Cc: Mayman, Gadi (OFA); Nelms, Scott (ENERGY); Thompson, Scott (MOF); McLean, David (MOF); Wynberg, Lynsey (OFA); Kennedy, Nancy (MOF)
>>> Subject: Re: Call with OPG
>>>
>>>
>>> On your last point, not really. If the province borrows and used the proceeds to make a loan the interest rate on the loan should be equal or greater than its cost of debt. Otherwise as you point out an upfront loss is triggered.
>>>
>>> My understanding of the accounting rules is that such is not the case for an equity injection where the expected return, if any, need not be directly linked to the cost of the Province's debt.
>>>
>>> Having said it goes back to Gadi's point that OPG provides the province with an ROE which is either recovered from the ratepayers each year hence reducing the GA smoothing benefit or recovered later. In other words ratepayer pays now or later.
>>>
>>> Of course if no ROE then the Province bears the fiscal burden of the interest for the debt to fund the equity injunction.
>>>
>>> Thanks
>>>
>>> Ken k
>>>
>>>
>>>
>>> Thanks
>>>
>>> Ken
>>>
>>>> On Feb 15, 2017, at 9:43 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>>>>
>>>> Hi Gadi,
>>>>
>>>> I agree on all that. The more complicated the structure, the harder it will be to explain and the more subject to complaints and misinformation, innocent or not.
>>>>
>>>> Technically, on the government's equity, covering its debt cost to finance the equity makes perfect sense. That said, there are still people asking why the rate regulated OPG ROE can't be zero, forgetting that the Province still has to service the debt it took on to acquire the equity.
>>>>
>>>> The GA situation will be that much worse to explain.
>>>>
>>>> And, as you note, the third party debt cost would be even harder to explain, and some ratepayers might say they'd rather pay now than pay later with interest.
>>>>
>>>> You raise the notion of the Province offsetting the external debt cost with a lower cost of equity on its 49%. That would be a very hard one to explain, and I think there'd have to be an accounting analysis on that -- aside from the annual "loss" on the equity, would there need to be an upfront write down or provision expense?
>>>>
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From:	Nelms, Scott (MOF)
To:	Mike Manning
Subject:	FW: Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx
Date:	Monday, April 03, 2017 1:18:35 PM
Attachments:	Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx

Here it is

From: Rehob, James (ENERGY)
Sent: April 2, 2017 7:19 PM
To: Nelms, Scott (MOF); Montgomery, Kaitlin (MOF)
Cc: Calwell, Carolyn (ENERGY/MEDEI/MRI); Shear, Dan (ENERGY)
Subject: RE: Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx

Confidential/Solicitor & Client Privileged

April 2, 2017

Good day, Scott and Kaitlin. Attached, please find an updated Draft 5 of the bill which is now also populated with annotations to a larger document prepared by Blakes which is their approach to the securitization and OPG's, IESO and Government's roles. Dan and I hope that this will prove to be a very useful product to walk you through tomorrow.

This has also been shared with our Legislative Counsel to keep them "in the loop".

Thank you!

James

For Dan and James

James P. H. Rehob
Senior Counsel
Ministry of the Attorney General
Legal Services Branch
MAG Civil Law Division
Ministry of Energy, Ministry of Economic Development and Growth, Ministry of Research, Innovation and Science, Ministry of Infrastructure, Accessibility Directorate of Ontario
56 Wellesley Street West
Toronto, ON M7A 2E7
Tel: 416-325-6676
Fax: 416-325-1781
james.rehob@ontario.ca

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LSB Instructs (April 2-17) based on **CONFIDENTIAL**
GOV2016.146.e
5-TK/TP

~~Electricity Amendment~~Fair Hydro Financing Plan Act, 2017 (Hydro Financing Initiative, etc. - title TBD)

EXPLANATORY NOTE

[Insert explanatory note.]

ELECTRICITY ACT, 1998

1. (1) Section 1 of the *Electricity Act, 1998* is amended by adding the following clause:

[OLC Note: GGRA provisions have been removed for now. Please confirm if they should be re-inserted.]

(2) Clause 1 (f) of the Act is struck out and the following substituted:

(f) to protect the interests of consumers with respect to the adequacy, reliability and quality of electricity service;

(f.1) to protect the interests of consumers with respect to the prices they pay for electricity, including protection of those interests through the Hydro financing initiative;

[OLC Note: Since the Hydro financing initiative is a defined term and is clearly required to be implemented under the new substantive provisions of the Act, I'm still not sure why this needs to be addressed in the purpose clause. However, I have included a purpose provision as per your instructions.]

Article 1 – Purpose

The proposed new legislation will likely include a large number of provisions intended to support the "financeability" of the structure. As a result, it may make sense for (LSB is exploring the potential) the Bill to create a new stand-alone energy statute, much like the *Green Energy and Green Economy Act, 2009* created the *Green Energy Act, 2009*.

The new legislation would have a purpose clause that explains the objective of intergenerational fairness. This would be useful for the markets to see, and may

help support the validity of the legislation from a constitutional law perspective (charge vs. tax)

x. Subsection 2 (1) of the Act is amended by adding the following definitions:

"Financing Entity" means the trust established by Ontario Power Generation Inc. under clause XX (a) or the entity prescribed for the purposes of clause XX (b); ("French")

"hydro financing initiative" means those policies of the Government of Ontario related to its decision to ensure costs to Ontario electricity consumers are allocated fairly over time, taking into account the useful life of new sources of and technologies for electricity; ("French")

[OLC Note: I have applied the precedent of the "smart metering initiative" as per your instructions. Just want to reiterate my concern that the reference to government policies is really vague (which initiative/ policies? At which point in time?) and I think this could cause lots of confusion, particularly if the policies evolve over time. It could also have unintended consequences.]

[OLC Note: To consider -- by describing the initiative as we have in the above definition, we are potentially linking the deferred amount to amounts that would otherwise be paid for by consumers as part of the GA. If the deferred amounts are not all about "the useful life of new sources and technologies" then the description of the initiative should likely be broadened. (For example, if some of the deferred amount may be used to cover high wholesale prices, one could argue that the initiative is NOT about allocating costs fairly over time… it's just about pushing the cost increase to future consumers without considering what is "fair" across the generations.]

Article 2 - Definitions

The new legislation will include many new defined terms. One important term will be "Funding Shortfall" (or equivalent wording). This will be the net reduction in cash flows to IESO as a result of the reallocation of a portion of the Global Adjustment to later periods of time. Currently, the "Funding Shortfall" would be limited to the Global Adjustment attributable to the procurement contracts, but this is a question that still has to be settled.

Another important defined term that is worth noting is "Replacement Event". This is an event under which the market would want to replace a person who has responsibility to take essential actions under the program (including LDCs, IESO and OPG), like invoicing and collecting amounts.

The triggering events are likely to include insolvency and breach of duty/obligation.

Another key defined term is "Transition Charge". This is the amount that will be calculated and applied to the "deferral consumers", based on the amounts of payments due under funding obligations incurred to cover the funding shortfall (i.e., what we have until now been calling "deferral repayments").

Another important defined term will be "Treasury Plan". This will be the written plan prepared by OPG relating to the sale of the "regulatory asset(s)" to the OPG Financing Entity (sometimes previously referred to as the "Financing Trust") and the debt issued by the OPG Financing Entity to the markets.

Another defined term will be "True-up Amount". This is a key provision for the market. It allows for a catch-up for estimate/actual adjustments and to address consumer non-payment credit losses.

A further defined term will be "Undertaking of the Province". This will be a promise by the Government not to impair the program. This will be expected by the market, even though it will be understood that there may be issues for investors to enforce the promise, or get damages if there is a breach.

x. (1) Subsection 6 (1) of the Act is amended by adding the following clauses:

(q.1) to enter into agreements or arrangements with the Financing Entity;

(q.2) to engage in activities related to making payments to and receiving payments from the Financing Entity under Part V.2, as required under this Act, and to engage in related settlement activities;

OLC Note: Is some of this covered already by clause (i)? Could we address this by expanding upon clause (i)? Trying to understand whether there is any potential overlap.]

(q.3) to engage in activities related to the [sale/disposition/conveyance/assignment] of the [right/regulatory asset] created under section XX, which activities may include,

[OLC Note: As discussed, please confirm terminology.]

(i) incurring liabilities in relation to the [right/asset];

(ii) [selling/assigning/disposing of?] the [right/asset] to the Financing Entity;

(iii) assigning [the right/asset] to third parties;

[OLC Note: I don't understand (iii) -- I thought the rights to the asset were being assigned to the trust and nobody else?]

(q.4) acting as a recovery agent for the Financing Entity in relation to [the right/asset];

x. (1) Subsections 25.33 (1) and (2) of the Act are repealed and the following substituted [TBD].

[OLC Note: As per our telephone discussion today (March 27), there seems to be ongoing debate about the policy direction:

1. Do you want to amend the GAM so that the money received from the FE and the money recovered by the FE are part of the initial GA calculation?

2. Do you want to leave the GAM section as is and add a requirement (in a new section) for the IESO to conduct additional adjustments for a subset of the payments referred to in s. 25.33? This second adjustment would be engaged in after the existing GAM is calculated. So it would be a further adjustment of what has already been adjusted under the GAM.

Until this fundamental question is answered, we are removing the proposed amendments to s. 25.33.]

OPTION 2:

Deferral adjustments, 25.33 amounts.

25.33.2 (0.1) For the purposes of this section and sections 25.34 and 25.35,

(a) "authorized entity" means **[the hydro financing trust established by Ontario Power Generation Inc. for the sole purpose of financing the recovery of the balance in the deferral account, or]** such **[other]** entity as may be prescribed by regulation;

(b) "deferral account" means the deferral account established under section 25.34;

(c) "deferral amount" means the amount recorded in the deferral account for each month during the deferral and recovery period;

(d) "deferral and recovery period" means the period from May 1, 2017 to April 30, 2047;

(e) "deferral consumer" means a consumer who is a member of a class of consumers prescribed by the regulations for the purposes of sections 25.34 and 25.35;

[NTD: This will be set out in a new subection 4(3) of O. Reg. 95/05 and will reflect OREC-eligible consumers other than non-

grid connected customers of IPAs (who would not pay a GA charge anyway). Note that this is not quite the same as "RPP-eligible" consumers.]

(f) "electricity supply cost" means the amount calculated according to the formula:

(A + B + C + D) - E

where,

A is the amounts paid by the IESO to generators, the Financial Corporation and distributors, whether the amounts are determined under the market rules or under section 78.1, 78.2 or 78.5 of the *Ontario Energy Board Act, 1998,*

B is the amounts paid by the IESO to entities with whom the IESO has a procurement contract, as determined under the procurement contract,

[NTD: A and B use exactly the same wording as is set out in (a) and (b) of the existing ss. 25.33(1).]

C is

[NTD: C is the "net new" costs associated with the GA deferral. These are costs that the IESO will record in the GA deferral account established under s. 25.34, and that the IESO (or its assignee) will subsequently recover. These costs consist of the interest and financing-related admin costs associated with the GA deferral (which costs will be flowed through from the hydro financing trust to the IESO). These costs do not include the principal amount deferred and recovered, since that is already captured as part of A and B.

The "net new" costs in C will be recoverable solely from a newly prescribed class of consumers - deferral consumers (i.e. those consumers who will benefit from the GA deferral). The rules for the recovery of these costs will be part of a new subsection 4(3) of the RPP Regulation.]

D is any other amounts that may be prescribed by regulation,

[NTD: Paragraph D would give us flexibility to add new cost categories by reg. if/as needed now or later.]

[GGRA-related amendments are removed for the time-being]

and

E is any other amounts that may be prescribed by regulation;

[NTD: Paragraph E would give us flexibility to add new cost categories by reg.

Question for leg counsel: If in the future HOEP were to exceed contract prices and/or regulated rates, presumably the formula would still work (i.e. in such case the amounts for A and B would simply be negative amounts)?] *[ntd-LSB: IESO appears to agree with that idea, based on our shared appreciation of how EA s.25.33 works today.]*

(f) "reduction period" means the period commencing May 1, 2017 and ending April 30, 2018;

(g) "RPP Regulation" means Ontario Regulation 95/05 (Classes of Consumers and Determination of Rates).

Electricity pricing adjustments

Adjustments by IESO

(1) The IESO shall, through its billing and settlement systems, make adjustments in accordance with the regulations that ensure that, over time, payments by such classes of market participants in Ontario as are prescribed by regulation, reflect the electricity supply cost.

Adjustments by distributors and retailers

(2) Distributors and retailers shall, through their billing systems, make adjustments in accordance with the regulations that ensure that, over time, payments by such classes of consumers in Ontario as are prescribed by regulation, reflect the electricity supply cost.

[NTD: There will be two "classes of consumers in Ontario that are prescribed" for the purposes of RPP-"plus" deferral – the EA regulation that "prescribes" these two classes will refer to (or be aligned with) the two classes as described in the RPP Regulation. 1) The first class are the deferral consumers (see definition above), and 2) the second class (or defined base consumer) will be the "proxy" Toronto Hydro consumer whose bill will only be allowed to increase year-over-year according to rules prescribed in a new s. 6.1 of the RPP Regulation.]

Variance accounts

(3) The IESO shall, in accordance with the regulations, establish and maintain such variance accounts as may be necessary to record all amounts payable or receivable by it under this section and under sections 25.34 and 25.35, in accordance with such rules and requirements as may be prescribed by regulation. *[ntd-DAN: I left "this section" even though this provision is part of a new s.25.33.2 – did you want "this section" to*

refer to "section 25.33"? If so, then we'd add this to the list we've started referencing proposed new s.25.34 and s.25.35. Consider.]

[Drafting note: We can prescribe the different variance accounts that must be maintained, and the different amounts that must be tracked and accounted for, by the IESO. Among other things, the IESO will presumably need to establish variance accounts related to the GA deferral and payback, to take into account timing and other differences. Any financing costs associated with these variance accounts (over and above the financing costs passed through to the IESO by the authorized entity (the hydro financing trust) would be subject to Board scrutiny.]

Same, distributors and retailers

(4) Distributors and retailers shall, in accordance with the regulations, establish and maintain such variance accounts as may be necessary to record all amounts payable or receivable by them under this section and under sections 25.34 and 25.35, in accordance with such rules and requirements as may be prescribed by regulation.

x. The Act is amended by adding the following sections:

Deferral account

25.34 (1) The IESO shall establish a deferral account to record, for each month during the reduction period and the deferral and recovery period, the difference between,

(a) the amounts that would be payable by deferral consumers in respect of the electricity supply cost for the month under section 6.1 of the RPP Regulation; and

(b) the amounts payable by deferral consumers in respect of the electricity supply cost for the month under section 6.2 of the RPP Regulation.

[NTD: IESO to confirm whether the differences between (a) and (b) would be recorded monthly.

Explanatory note: The Board will determine a rate under a new s. 6.1 of the RPP Regulation that will essentially follow the same process the Board uses to establish the RPP rate, except that it will establish a rate for the deferral consumers (which is a slightly broader class than RPP consumers). The Board will also determine a "proxy" rate for the deferral consumers, calculated according to a different set of rules set out in a new s. 6.2 of the RPP Regulation. The rules in s. 6.2 will establish the "proxy" rate for a "proxy" Toronto Hydro customer consuming an average of 750 kWh/mth, to achieve an all-in tax-included total bill amount reduction of approximately 17% (the bill reduction for GA deferral + 8% OREC will result in an all-in bill reduction for May 1, 2017 – April 30, 2018 of 25% over the May 1, 2016 – April 30, 2017 period). There will be

additional rules dealing with bill increases and full repayment of the GA deferral by April 30, 2047.]

Note that because we refer to the new provisions in the RPP Regulation, we will need to amend that regulation *before* the introduction of the proposed legislative amendments. Drafting of the proposed RPP Regulation amendments is underway.

Do we need to create a parallel provision requiring distributors and retailers to establish deferral accounts as well?]

(2) The IESO shall record interest on the balance of the deferral account at a rate or rates reflecting the costs incurred by the IESO, or by any assignee under section 25.35, to finance the amounts recorded in the deferral account.

(3) The IESO shall also record in the deferral account the costs incurred by the IESO to finance the amounts recorded in the deferral account.

[NTD: This is a placeholder for what we will need here. The concept is that ss. (2) and (3) will ultimately apply to the interest and admin costs incurred by the hydro financing trust (assignee of the right of recovery under s. 25.35) in providing funds to the IESO to finance the GA deferral. Those interest costs and admin costs will be fully recoverable through section 25.35, subject to Board scrutiny presumably limited to verifying the calculations. This is not intended to address interest and costs incurred by the IESO and recorded in the variance accounts established under ss. 25.33(5).]

Recovery of GA deferral amounts

25.35 (1) The IESO shall have the right to fully recover the balance recorded in the deferral account. **[The Board shall authorize?]** recovery of the balance from the deferral consumers over the deferral recovery period in accordance with the prescribed rules.

[NTD: What role should the Board play in determining the amounts recovered each year (within the smoothing parameters that are prescribed)? For e.g., could the Board set rates such that the year-over-year increase in the proxy Toronto Hydro customer's all-in bill was less than the maximum permitted under the prescribed rules?

The prescribed rules will be set out in the new s. 6.2 of the RPP Regulation, which will determine how much the "proxy" Toronto Hydro customer's monthly average bill can increase year-over-year (after the reduction period). Basically, for the first four years after the reduction period, the increase will be limited to CPI. For the balance of the deferral and recovery period, the increases will be limited to 10%, with an overarching requirement that the deferral amounts be fully repaid by April 30, 2047.]

Assignment of right of recovery

(2) The IESO shall have the right to assign**[, in whole or in part?,]** to **[one or more?]** authorized entities, the IESO's rights under subsection (1).

[NTD: This is largely a placeholder for what needs to be addressed here. We will need to determine how to characterize this transaction. For e.g., will it be an outright assignment? Will it be a series of assignments? Should it be characterized as a "sale"? How will this transaction be implemented – e.g. by way of a contract between the IESO and the Trust? We will need the input of external counsel and others to ensure that it adequately supports the contemplated financings.]

Payments to assignee

(3) In the event of an assignment to an authorized entity under subsection (2), the IESO shall, through its billing and settlement systems, make payments to the authorized entity of the full amounts paid to the IESO in respect of the rights assigned.

[NTD: This is largely a placeholder for what needs to be addressed here. Iin addition to requiring IESO to make payments to the authorized entity, do we need to include explicit provisions giving the assignee the right to recover the amounts in the deferral account that are covered by the assignment?

We will need provisions dealing with billing and payment as between the authorized entity and IESO. We will also have to decide whether the interest and admin costs incurred by the authorized entity will simply be passed through to IESO, or whether the authorized entity (or OPG) will have an opportunity to keep any profits made on financing activities (swaps, etc.) by establishing some sort of "reference rate" that IESO would have to pay (and that might be different than the rate(s) the authorized entity would have to pay). A middle ground that could be considered would be to cap the amount of profits the authorized entity (or OPG) could make.

Along similar lines, the amounts charged by OPG to the authorized entity to provide admin services should be subject to Board review (e.g. for reasonableness). This would not jeopardize the ability of the authorized entity to recover all of its costs (since it would affect the amounts OPG could recover from the authorized entity).

We also need to contemplate a provision that if there is a change of law by the Government of Ontario that materially adversely affects the ability of the authorized entity to fully recover the assigned deferral account amounts, then repayment of those amounts will be accelerated and become immediately due and payable.]

x. The Act is amended by adding the following provisions after s.29:

Transition Charges -- Ratepayer Obligation to Pay a Transition Charge

s.29.0.1 (1) Each consumer in the class of ratepayers to which this program applies (previously referred to as the "deferral consumers") will have a direct statutory obligation to the OPG Financing Entity to pay its share of the deferral repayments (principal, interest, financing costs).

Indebtedness of Ratepayers –
(2) This will be a debt owed by the consumer directly to the OPG Financing Entity. If it is not paid, the OPG Financing Entity can sue the consumer directly through the agreed procedures. This is identifying an explicit and identifiable revenue stream for the comfort of investors.

Separate tracking - distributors,
(3) This debt is separate from the debt owed by the consumer to its LDC, although the LDC will be the collection agent.

No set-off, etc. *[see similar provision at EA s.29.0.3(2)]*
(4) This debt cannot be netted out against any amount owed by the LDC to the consumer (e.g. year-end credit to consumer on equal monthly billing).

Allocation of Ratepayer Payments
(5) If a consumer pays less than its total invoiced amount, the payment will be allocated pro rata between the deferral repayment and the amounts owing to the LDC.

Transition Charges are Irrevocable

(6). This is intended to prohibit any reversal of amounts that must be paid to meet the terms and conditions of the funding obligations to be incurred under the program.

> **The deferral repayments are due regardless of whether a financing obligation incurred under the treasury plan is consistent with government policy at the time a related payment obligation arises.**
>
> **If the Fair Allocation Plan is amended after a funding obligation is properly incurred, any inconsistency in the payment profile will not impair the existing funding obligation or the pass-through of related payment amounts as Transition Charges.**

Anti-avoidance; No-by-pass

(7) The idea here tracks the U.S. transactions, which say that the obligation of a consumer to pay Transition Charges cannot be "by-passed". If a consumer leaves the grid, he or she will still be obligated. See the highlighted text in the definition of "Ratepayer" for a sense of how this may be accomplished.

> **This concept is a key to a rated market financing and will need to be developed further.**
>
> **For example, self-generating customers could be charged a flat fee (for example, equal to the amount that would be payable by the "representative" Toronto Hydro customer that underpins the current government policy on the 25% or some other basis.)**

Distributor, agent for Financing Entity,
s.29.0.2(1) LDC is agent for the OPG Financing Entity. LDC must invoice the deferral consumer the deferral repayment amount - referable to the items described in "Finance Amount" (i.e., an amount already borrowed).

IESO - Calculation of the Period Transition Charge

(2) IESO will calculate the total amount of deferral financing that will be repayable in an applicable [e.g. 6 month] period.

(3) IESO will then determine the deferral repayments due from deferral consumers based on a prescribed methodology for allocating payments to individual deferral consumers.

Notice of Transition Charges, IESO to distributors

(4) IESO will then inform each LDC of the amount of the deferral repayments to be included in the invoices issued to each deferral consumer in the LDC's service territory.

Adjustments *[ntd: Consider – Deferral repayment amount final]*

(5) Deferral consumers cannot challenge the amount of the deferral repayment showing on their invoice unless there is a substantial calculation error.

Successors of Electricity Distributors –
(6) Any successor of an LDC will be bound by the same obligations as the original LDC re: billing and collecting deferral repayments.

Successors of IESO –

(7) Any successor of the IESO will be bound by the same obligations as the original IES re: billing and collecting deferral repayments from distributors *[ntd-LSB: what about from consumers?].*

Appointment of an Alternative Invoicing Agent *[NTD – this provision may be moved closer to the powers/authorities of the OPG financing entity.]*

(8) If a "replacement event" (as defined in any payment obligation incurred to fund a deferral) occurs in respect of an LDC, the OPG Financing Entity can appoint someone else as the OPG Financing Entity's agent to collect deferral repayments. The LDC must sign whatever agreements and assignments are needed to enable the replacement agent to collect the deferral repayments from the LDC's deferral consumers.

Regulatory Asset Owner has Standing

(9) The OPG Financing Entity (or investors through their security) will be able to sue LDCs for failing to properly calculate or invoice the financing repayments.

29.0.3 Collections and Remittances [Collecting and Remitting Deferral Repayments]

(1) If a "replacement event" (as defined in any payment obligation incurred to fund a deferral) occurs in respect of an LDC or the IESO, the OPG Financing Entity can appoint someone else as the OPG Financing Entity's agent to collect and remit deferral repayments. The LDC (or IESO, as applicable) must sign whatever agreements and assignments are needed to enable the replacement agent to collect and remit the deferral repayments. "Replacement Events" are necessary to investors to safeguard against a person holding money in a distressed circumstance.

No Set-off, etc. *[see similar provision at EA s.29.0.1(3)]*

(2) The deferral repayments cannot be netted out against any amounts owed by the party responsible for collecting those repayments.

Sequestration,

(3) If any LDC or the IESO fails to remit deferral repayments, the OPG Financing Entity can get a court to order the LDC (or IESO, as applicable) to require them do so.

x. Subsection 53.1 (1) of the Act is repealed and the following substituted:

Objects of Ontario Power Generation Inc.

53.1 (1) The objects of Ontario Power Generation Inc. include, in addition to any other objects, the following:

[OLC Note: I know that the words "in addition to any other objects" appears in the current provision, but it seems very odd. This suggests that the objects are unlimited, which doesn't seem to be the intention but I could be wrong.]

1. Owning and operating generation facilities.

2. Establishing, operating and supervising the activities of entities for the purposes of supporting and promoting the government's hydro financing initiative.

3. Providing financial and other support to the IESO in its activities in relation to the hydro financing initiative.

4. Engaging in such financing, borrowing, lending and related activities and transactions to support the IESO with short-term or long-term financing.

5. Providing equity, not exceeding the prescribed amount, to support the financing capacity of the Financing Entity.

Subsidiaries

(1.1) Ontario Power Generation Inc. may create one or more subsidiaries in order to more efficiently conduct its activities or achieve its objects.

x. Section 53.2 of the Act is repealed and the following substituted:

Rights of the Minister[1]

53.2 (1) The Minister, on behalf of Her Majesty in right of Ontario, may acquire, hold, dispose of and otherwise deal with securities or debt obligations of, or any other interest in, Ontario Power Generation Inc. or any of its subsidiaries.

Agreements

(2) The Minister, on behalf of Her Majesty in right of Ontario, may enter into any agreement or arrangement that the Minister considers necessary or incidental to the exercise of a power under subsection (1).

x. The Act is amended by adding the following Part:

PART V.2
HYDRO FINANCING INITIATIVE

FAIR HYDRO FINANCING PLAN

Establishment and adoption of the Fair Allocation Plan

A. 1 (1) The Minister of Energy [may/shall] establish a "fair allocation plan"

(a) The purpose of the plan is generally to try and reallocate the portion of GA attributable to the procurement contracts over the anticipated useful life of the generation assets under those contracts.

- **This is the intergenerational funding of the Green Generation Initiaitves.**
- **One policy question is whether the amounts deferred and the period over which the deferred amounts are repaid are to be limited to the portion of GA attributable to the procurement contracts and to the anticipated useful life of the [renewable] generation assets under those contracts.**

- From a constitutional validity perspective (and hence a financeability perspective) these limits are very important.

[1] FLS - this provision is based on s. 49 of the Act

-Financial/economic modelling to verify this link is required.

Principles and Parameters,

(2) Based on this initial description (which is only illustrative to advance the initial stakeholder discussion), the Minister would determine the details of the "fair allocation plan", but must take into consideration the following principles:

- **The deferred GA costs should be spread over a period not exceeding the anticipated remaining useful life of the generation assets under the procurement contracts**
- **The plan should specify the length of the "reference periods", to identify which deferral consumers are responsible for which deferral repayments**
- **The share of the deferral repayments to be allocated to deferral consumers in each "reference period" should reflect a reasonable assessment of the remaining anticipated useful life of the generation assets under procurement contracts and perhaps to the benefits received by those deferral consumers from the procurement contracts (e.g. transition off coal)]**
- **No deferral consumer group should bear an unreasonably disproportionate share of the deferral repayments. That could be limited to a maximum amount, determined on a formula basis, if it makes sense tot he stakeholders**
- **In making the allocations, real (i.e. inflation-adjusted) dollars should be usedThe fair allocation plan is made using forward-looking information and projections.**
- **If, after the fact, the Minister determines that a Ratepayer Group paid more than would otherwise would have been the case had the projections for such period been accurate or other considerations come to light, adjustments to the plan could be made.**

Attribution Methodology

(3) The program will need to define how deferral consumers will be allocated an appropriate share of aggregate adjustment amount.

Confirmation][Review] of the Fair Allocation Plan – [OEB?]

Confirmation][Review] of the Fair Allocation Plan – [OEB?]

(4) Consideration will be needed regarding the level of review and confirmation of the plan is needed or appropriate. For example, should the scope of review be limited to calculations only? If there is a need for review, then consideration will be needed as to who will be the reviewer and under what authority, etc.

THE TREASURY PLAN

Power to Prepare and Implement the Treasury Plan –

A.2 (1) The "Treasury Plan" will be prepared by OPG. It must follow the requirements set out in this Part. Accounting considerations will need to be factored into this delegation, as well as the degree of province input initially and on an on-going basis. [Note for leg counsel: We will need to create the necessary sub-delegation authority]

Required Terms and Conditions of the Treasury Plan

(2) The Treasury Plan will establish the basis for OPG making funding decisions, which will need to align with the Fair Allocation Plan.

Power to Review and Approve the Treasury Plan

(3) The Minister may designate one or more persons to review, and require changes to the Treasury Plan. (This review could also be given to the Minister.) *[NTD-: Assumin no role for OEB – confirm. Any role for MOF/OFA here?]*

Obligation to Apply IESO Remittances,

(4) OPG will need to ensure that pass-through amounts, transferred to it as agent for the OPG Financing Entity, are only used to repay the debt and related costs.

Non-Recourse,

(5) The Treasury Plan will provide that the investors and other contracting parties will not have recourse to the IESO, LDCs, agents, the OEB or the Province, except where such parties fail to comply with applicable law. This may be modified in the contracts under which a financing arises.

NOTE: The documentation creating the Funding Obligations must expressly state that such obligations are not guaranteed by the Province.

NOTE: See IESO/Stikeman's language for "Regulatory Asset" above.

Incurrences are Binding,

(6) A failure to implement the Treasury Plan will not impair the pass-through of the deferral amounts or the validity of an otherwise valid funding obligation.

- **NOTE: Separate from the legislative provisions, we will also be preparing a very rough sketch of some of the items that might be included in the Treasury Plan direction.**
- **The sketch will be for illustration purposes only and will be for use in discussions with stakeholders including OPG and IESO.**

Crown bound, actions prohibited,

A.3 (1) No Action to limit, alter, or impair or terminate Transition Charges, the Regulatory Asset or Collections – *[NTD: alternative* - Crown bound, prohibition against discriminatory action.

(2) The Province will be prohibited from taking or permitting any action to limit, alter, or impair or terminate Transition Charges, the Regulatory Asset or collections.

Undertaking and Agreement

(3) Under this Undertaking, the Province will agree for the benefit the OPG Financing Entity that it will not impair the value of the Regulatory Asset or the Transition Charges imposed under this Part. This "pledge" is in line with market expectations. Enforcement issues arise in this sort of undertaking, which will be assessed by the market and rating agencies based on the likelihood that a failure by the Province would lead to a successful damages claim. Unlike in the U.S., the law regarding such a claim is uncertain. Nevertheless, we expect that this sort of Undertaking will be requested in the legislation itself (i.e., requiring an act of the legislature to disavow – which is a higher bar than simply walking away from a contractual undertaking.

[OLC Note: TBD where to place this Part within the Act and how to structure this Part. Temporary number (e.g. A1, A2, A3 etc.) has been used for now.]

FINANCING ENTITY

Financing Entity, established or prescribed

A1. (1) For the purpose of accomplishing the hydro financing initiative, the Minister may,

(a) direct Ontario Power Generation Inc. to establish and operate a trust; or

(b) direct Ontario Power Generation Inc. to [oversee? Administer?] an entity prescribed by the regulations.

[OLC Note: Would the direction of the Minister include any additional instructions re timing etc.?]

Duty of Ontario Power Generation Inc.

(2) Ontario Power Generation Inc. shall comply with the direction of the Minister.

[OLC Note: Once OPG takes action under A1 in accordance with the Minister's direction, what happens if at some point in the future, the Minister wants a different entity to take over the role of the FE? Is this a concern that needs to be addressed?]

Object of Financing Entity

A2. (1) The object of the Financing Entity is to finance the amounts required to accomplish the hydro financing initiative.

[OLC Note: We are imposing several obligations on the Financing Entity (FE). As a practical matter, how will these obligations be enforced? Who will be responsible for meeting these obligations? (e.g. would there be directors or officers of the trust?). Or will the OPG be responsible for meeting these obligations as the body that establishes/manages the trust or oversees the designated entity?]

Activities

(2) To achieve the object, the Financing Entity shall engage in the following activities:

[OLC Note: Just want to confirm that this should be "shall" and not "may".]

1. Borrowing funds from the Financial Corporation or from such other persons or entities [as may be prescribed?].

2. Investing funds.

3. Making payments and loans to the IESO or such other entity as may be prescribed in accordance with the regulations [or an order of the Board].

[OLC Note: I think it would be best to specify whether the rules would be set out in a reg or in a Board order to avoid confusion.]
[OLC Note: Should the "loans" language be removed, since you noted that the IESO is not "borrowing" from the FE?]

4. Receiving payments from the IESO or such other person or entity as may be prescribed in accordance with the regulations.

5. Issuing securities or debt ***[in the manner prescribed?].***

6. Engaging in any activities, including entering into such transactions, agreements or arrangements as may be prescribed and in accordance with the regulations.

Board review of expenditures, etc.

A3. (1) The Financing Entity shall, at least 60 days after the end of each fiscal year, submit its expenditures relating to its operations for the fiscal year including the expenses it has charged to Ontario Power Generation Inc. or the IESO, or that it has been charged by the Financial Corporation, in relation to those operations, to the Board for review.
[OLC Note: The list of items that have to be reported on could be more prescriptive (e.g. specifying specific amounts to be set out) or it could also allow for the Board to specify what it wants to see in the report. Let me know if you'd like to adjust the wording of the requirement.]

Board recommendations, etc.

(2) The Board may review the expenditures and charges referred to in subsection (1) and make recommendations to the Financing Entity as are appropriate in order to ensure the most efficient operation and management of the Financing Entity in order to protect consumers.
[OLC Note: Rather than saying "in order to protect consumers", should this say "in order to achieve the object of the FE"? Or perhaps this could just be deleted altogether with no need for replacement language.]

Deemed assets, entity,

A4. Despite any other provision of this Act or the *Business Corporations Act*, the assets and liabilities which are resident in and form part of the property of the Financing Entity shall not form part of the assets and liabilities of Ontario Power Generation Inc. or any of its subsidiaries for any purpose.
[OLC Note: You posed a question about excluding an OPG subsidiary from this rule. Please instruct.]

OBTAINING FINANCING

[OLC Note: It will be important to read all of the provisions that follow against the provisions in the existing Act, to ensure there is no overlap/confusion being created due to potential interactions between existing authority and new authority. The drafting focus so far has just been to get the relevant substantive provisions into the draft without evaluating how they fit into the broader scheme of the Act.]

Ontario Power Generation Inc. to obtain financing

A5. (1) The IESO may direct Ontario Power Generation Inc. to cause the Financing Entity to engage in any of the following activities in order to accomplish the hydro financing initiative:

[OLC Note: As a practical matter, how would OPG "cause the FE" to do these things? How is this different from "directing"?]

1. Financing, borrowing or lending to provide the IESO with short-term or long-term financing.

2. [Purchasing/receiving/obtaining the right created under section XX] and making any payments to the IESO that relate to the IESO's activities in support of the hydro financing initiative.

[OLC Note: Not sure if the regulated assets would always be "purchased" or if other terminology might be needed. Please advise.]

3. Collecting from the IESO amounts that the IESO is required to pay in relation to its activities in support of the hydro financing initiative.

4. Assigning its [the IESO's?] rights to all or part of the regulatory assets established under section XXXX.

[OLC Note: What is para. 4 about? If this is about forcing OPG to make the FE do things, then does this belong in the list? I thought that it was only the IESO that would be assigning the rights to the FE]

5. Such other activities as may be prescribed.

Same

(2) Ontario Power Generation Inc. shall comply with a direction under subsection (1) within the time specified in the direction [and any prescribed rules?].

IESO to enter into transactions

A6. (1) The IESO shall, in order to support the achievement of the hydro financing initiative, enter into transactions with the Financing Entity or any other entity for such amounts as are necessary to support the hydro financing initiative.

[OLC Note: My understanding is that the need for "or any other entity" stems from the need to allow for the IESO to obtain temporary financing in the immediate term, before it is able to access the FE. Do you want to narrow this so that the IESO is only authorized to do this before the FE is up and running? Or do you want to keep it available on an ongoing basis?]

Same

(2) In entering into transactions under subsection (1), the IESO shall comply with the regulations.

RIGHT OF RECOVERY [CREATION OF REGULATORY ASSET]

[OLC Note re the following provisions:
I found a provision dealing with the concept of "regulatory asset" in Bill 210 from 2002 (see s. 79.13 of the OEBA). It deems certain things to be regulatory assets but does not say much more. On the phone, you noted that the term "regulatory asset" does not have any legal meaning on its own but is just an accounting term that has been used to describe the statutorily created right of recovery. However, you also said that there may be a need to use this term in order to convey the intended meaning from an accounting perspective.

In order to ensure that the drafting captures the policy intent, please answer/address the following questions:

1. Should we be creating a statutory right of recovery or deeming certain amounts to be a regulatory asset? [NTD-LSB: Yes. The term "Regulatory Asset" has currency in commercial law (parliance) and since much of what we're doing is to support a securitization model, the term should remain for now. Further, the term "regulatory asset" was consistently referred to in the documents provided to ENERGY LSB by Blakes. Further, IESO/Stikemans offered up alternative language for the creation of a "regulatory asset" (as an intangible asset of sorts). You said you'd consult on whether the regulatory asset terminology is important to flag in the Bill.

2. You said you're not sure whether or not the Act will require the IESO to sell/assign the right. Please instruct. If it is optional for the IESO to sell/assign, then it seems that the right could in theory remain with the IESO (unless you are saying that the statute can just create the right of the FE to recover without any need for the right to be assigned/sold by the IESO… in which case please explain why we need to deal with the sale/assignment at all). Please clarify.

3. I'm assuming that if we are creating a right, then the right must be held by someone (e.g. the IESO) before it can be assigned/sold? So should the right be created in the Act for the IESO (e.g. the IESO has a right to recover the amounts from distributors and prescribed consumers) since the IESO would then sell/assign/transfer the right to the FE?

The FE must also have the right to recover from the IESO itself, so that creates an extra complication.

4. Should there be some indication of when the right of recovery/regulatory assets will no longer continue to exist (e.g. once all of the amounts have been paid?). I notice that your instructions below about the debt indicate that the debt is no longer owing once the amounts are paid, but do we need to indicate that the regulatory asset also ceases to exist at that point?

Right of recovery created

A7. A right to recover the following amounts in full from the IESO, distributors and prescribed consumers is created.

1. The [deferred amount].

2. The amounts of costs relating to the operation or management of the Financing Entity, as are approved by the Board.

[OLC Note: How will the Board be approving these costs? Is this related to the expenditure report submitted to the Board? That provision dealing with Board expenditures doesn't refer to any approval taking place… just a review and recommendations.]
[OLC Note: Need to mention expenditures?]

3. Other amounts as may be prescribed or as may be approved by the Board.

OLC Note: Are you going to be saying anything about how the interest will be calculated?

Sale [and/or?] assignment of [right? Regulatory assets?]

A8. (1) The IESO [may? Shall?], in accordance with the regulations, sell [and/or?] convey to the Financing Entity the right to recovery created established under section A7 on such terms and conditions as are provided for by the Financing Entity.
[OLC Note: Your instructions include the terms "sell", "assign" and "convey" -- which are correct?]
[OLC Note: Your instructions suggested that something other than the "regulatory assets" may need to be assigned to the FE. Are you referring to the "warehousing" liabilities assumed by the IESO in the early days? What else would need to be assigned? Could these items be listed above in A7 or is there a reason why they need to be kept separate?]

Sale deemed final

(2) The sale and conveyance referred to in subsection (1) is deemed to be final for all purposes.
[OLC Note: What is this intended to achieve? Is this based on precedent language that has been interpreted to have the desired effect?]

Debts

(3) For greater certainty, the [amounts to which the FE has a right of recovery] are debts owing by the IESO, distributors and prescribed consumers to the Financial Entity until the amounts have been fully paid and fully discharged.

[OLC Note: Why is subs. (3) necessary? Isn't it inherent in the sale of the regulatory assets that the FE would have acquired the future right to collect these amounts? Perhaps it is unclear that the amount can be collected from not just the IESO but from others down the chain. But isn't that what the "right of recovery" section above is meant to cover?]

[OLC Note: I haven't checked to see how other similar provisions dealing with debts are drafted. Not sure we need the "for greater certainty" and also not sure what the distinction is between "fully paid" and "fully discharged". This provision will need further consideration. You also noted that you may want to specify who determines when all obligations have been satisfied.]

IESO to recover amounts

A9. The IESO shall recover the amounts set out in section A7 from distributors and prescribed consumers, in accordance with […]:

OLC Note: how are the requirements that would determine recovery for this subsection meant to interact with the GAM reg?

[OLC Note: The following two subsections are placeholders. You noted that *the provision is going to have to evolve to deal with consumers who exit the grid (disconnect) completely either because they leave the province or they decide to generate their own electricity and completely disconnect. You also want to be able to prescribe* methods of ensuring that the amounts required cannot be "by-passed". I'll need to understand what is meant by "by-passed".]

Distributors liable

(x) The IESO and distributors are entitled to compensation for any shortfall in relation to the amounts the IESO must pay to generators, the Financial Corporation or other persons including prescribed persons, under section 25.33 resulting from the IESO's activities under the hydro financing initiative.

Consumers liable

(X) Prescribed consumers are required to contribute towards the amount of any compensation referred to in subsection (4) in accordance with the amounts and methods prescribed by the regulations and such amounts shall not be by-passed.

USE OF FUNDS TO REDUCE ELECTRICITY BILLS

[OLC Note: Depending on how things land with s. 25.33, this might be a place to explain how the transactions between the IESO and the FE translate into reduction in the electricity bills of RPP consumers. Regulations could specify how the IESO would ensure that the short-term rate reductions that flow from the FE amounts are only received by the targeted class of consumers and that this same class of consumers is the only class responsible for the repayment of FE funds in the long-term.]

ALTERNATIVE LANGUAGE – REGULATORY ASSET -- PROPOSED BY IESO (STIKEMANS)

Regulatory Asset Created

A7. (1) There is hereby created and conferred upon the IESO a "Regulatory Asset" consisting of the right to recover, in addition to the amounts otherwise recoverable, in accordance with the Regulations, the aggregate of the following amounts [from distributors and] prescribed consumers. **[Quare: do we regard the Regulatory Asset as a single asset in a variable amount or as different assets arising on each deferral]:**

1. The [deferred amount, including interest accrued thereon].
2. The amounts of costs relating to the operation or management of the Financing Entity, as are approved by the Board.
3. Other amounts as may be prescribed or as may be approved by the Board.

(2) The Regulatory Asset created by (1), shall constitute, for all purposes, a property right, shall be transferable by the IESO in accordance with Section A8, and shall constitute an intangible in which a security interest can be created for purposes of the *Personal Property Security Act*.

Election to Transfer Regulatory Asset

A8. (1) The IESO shall, from time to time, in accordance with the Regulations, elect to transfer to the Financing Entity all or any portion of the Regulatory Asset, on such terms and conditions as IESO may determine.

(2) Upon any election by the IESO pursuant to (1), the Financing Entity shall pay to the IESO in respect of the Regulatory Asset, or the portion thereof in respect of which the election was made, an amount, not less than the Deferred Amount, determined in accordance with the Regulations.

(3) Upon any election by the IESO pursuant to (1), the Financing Entity shall become the person entitled to the benefit of the Regulatory Asset, or the portion thereof in respect of which the election was made, free and clear of any adverse claim (other than any such claim created by the Financing Entity) and shall be entitled to exercise all of the rights and remedies conferred by or arising in respect of the Regulatory Asset, or

the portion thereof in respect of which the election was made, and the IESO shall cease to have any rights (except as provided in Section A9) to or in respect of the Regulatory Asset, or the portion thereof in respect of which the election was made, all as if the Regulatory Asset, or the portion thereof in respect of which the election was made, had originally been conferred upon the Financing Entity and not the IESO.

(4) Upon any election by the IESO pursuant to (1), the IESO shall have no further rights or obligations in respect of the Regulatory Asset, or the portion thereof in respect of which the election was made, and the Regulatory Asset, or the portion thereof in respect of which the election was made, shall not form part of the assets and liabilities of IESO for any purpose.

(5) The LG in Council may adopt regulations providing for the circumstances in which IESO shall make the election or elections provided for in (1).

Financing Entity may Grant Security Interest

A9. (1) The Financing Entity may, at any time after an election referred to in Section A8(1), create a security interest in favour of any person in all or any portion of the Regulatory Asset subject to such election, all on such terms and conditions as the Financing Entity may determine.

(2) Except as provided for in Regulations adopted pursuant to (3), *The Personal Property Security Act* shall apply to any security interest created pursuant to (1), except that the rights of the secured party on default shall be limited to receiving the amounts collected in respect of the Regulatory Asset, or the portion thereof subject to the security interest, as and when collected by the IESO in accordance with A10.

(3) The LG in Council may adopt regulations providing for the terms on which the security interest provided for in (1) can be created and perfected and for the priority of any such security interest.

IESO to Collect Amounts in Respect of the Regulatory Asset

A10. Subsequent to any election pursuant to Section A8, the IESO shall, as agent on behalf of the Financing Entity and any secured party, use reasonable efforts to collect the amounts owing in respect of the Regulatory Asset, or the portion thereof in respect of which the election was made, and shall promptly pay over to the Financing Entity or the secured party the amounts collected.

--------*END OF IESO/BLAKES ALTERNATIVE LANGUAGE FOR REG. ASSET ---*

------- ***BLAKES VERSION OF LANGUAGE FOR REGULATORY ASSET***

The Regulatory Asset, Composition,

A7(1) The "regulatory asset" consists of the following:

- **present and future statutory obligation of:**

- **deferral consumers - to make all deferral repayments (including interest and late payment fees)**
- **LDCs - to invoice the deferral consumers for the deferral repayments and to remit the amounts collected to the IESO**
- **IESO - to receive and remit the deferral repayments from LDCs to the OPG Financing Entity**

- **All deferral repayment amounts collected**
- **All amounts in LDC or IESO deferral payment bank accounts**

Validity of Dispositions
(2) This section is reinforcing by statute the "sale" of the asset to the Financing Entity. This has been an important feature of the legislation in other jurisdictions in similar circumstances. Specifically, it says that "Dispositions" of the Regulatory Asset are "true sales", and not subject to challenge. This is an essential requirement for a securitization transaction. This provision identifies possible grounds for a challenge that a sale took place and indicates that those events do not affect the validity of the sale.

Deemed Perfection and Priority of Dispositions
(3) This is reinforcing the automatic nature of the "sale" of the asset. It Provides for a clean sale to the OPG Financing Entity, free and clear of encumbrances (i.e., no specific need to "perfect" the sale.

Validity of Pledges,
(4) Statutory override permitting the OPG Financing Entity to give a security interest in the "regulatory asset" to investors.

This would give the investors (through an indenture) the right to enforce collection of the deferral repayments to pay off amounts owed by the OPG Financing Entity to the investors upon certain defaults by the OPG Financing Entity under an indenture.

Deemed Perfection and Priority of Pledges
(5) This is reinforcing that a commercial pledge given by OPG Financing Entity is valid and will have priority without specific "perfection". The result is that a pledge of the Regulatory Asset as security in accordance with the Treasury Plan will be given priority to other claims. The Pledge includes proceeds from the Regulatory Asset and is not affected by comingling or the ordinary requirement to file a financing statement under the PPSA.

Enforcement of Property Rights –

(6) The rights of any Regulatory Asset Owner to collect and enforce its rights and interests in, to or in respect of the Regulatory Asset shall be exercised in the manner set forth in Article 5. *[ntd-: NOT an annotation – pulled directly from Blakes' document.]*

Collective Action Required –
(7) This anticipates that the Regulatory Asset will be structured as a variable interest that can be divided between IESO (until it sells) and one or more OPG Financing Entitys. The likely format will be a co-ownership agreement, that will allow for different owners to have a fractional undivided ownership interest in the Regulatory Asset. Those will entitle the owners to a specified share of the cash flows, which will correspond to their finance payment obligations. This will allow for future financing flexibility.

MISCELLANEOUS

Fair Hydro Financing Plan, miscellaneous,

A.8 (1) Consideration will be given to whether any additional 'miscellaneous' provisions are needed (and expected by the market) to support the financing of this structure. Some of these provisions are not typical in legislation, and so will need further consideration (in consultation with leg counsel).

Regulations

114(1.5) The LGIC may make regulations to implement the Fair Hydro Financing Initiative

-(a) The power to implement the program (and to set out some of the details of the program) through regulations is important. Decisions remain to be made (once the drafting is a little further advanced) about what provisions/details need to appear in the proposed legislation, and what provisions/details can be set out in regulations.

ONTARIO ENERGY BOARD ACT, 1998

x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* is amended by adding the following paragraph:

6. To facilitate the implementation of the [hydro financing initiative].

[OLC Note: Would need to link with definition in the EA or else spell out the definition here - TBD.]

x. Section 27.1 of the Act is amended by adding the following paragraph:

Hearings

(1.1) A directive may specify whether the Board is to hold a hearing, the circumstances under which a hearing may or may not be held and, if a hearing is to be held, the type of hearing to be held and the time within which it must be held.

The underlined is what makes this different from the other provisions in the Act that basically have the same wording. There are already a number of places in the Act where you have this type of hearings provision re directives (e.g., s. 27.2 (7)). If you basically want the same authority in each instance, then the wording should be consistent in each case. There are already some discrepancies between the current provisions (e.g., s. 27.2 (7) talks about types of hearings, whereas s. 28 (2) doesn't). Differences in wording will typically be presumed to be differences in meaning. So, the question is what you're intending to authorize in each case, and whether differences are intended. If you want the same thing everywhere, it should all be worded the same. Let me know.

[OLC Note: Waiting for confirmation whether amendments to s. 78.7 are needed. Please advise.]

x. Section 78 of the Act is amended by adding the following subsection after subsection (3.0.5):

Rates, fair hydro financing initiative activities -IESO, OPG, distributors, etc.
(3.0.6) The OEB would not be precluded from taking into account the performance of duties under this Part by any entity regulated by the OEB, including fees received by such entity in excess of the incremental costs of the provision of such services.

x. Section 79.16 (3) of the Act is repealed and the following substituted:

Adjustment to eliminate variances

(3) In determining rates under clause (1) (b), the Board shall take into account balances in variance accounts established under section 25.33 of the *Electricity Act, 1998* and, subject to section X of that Act, make adjustments with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct. [OLC Note: Please let me know what section the highlighted portion is supposed to refer to… is it the provision that says the IESO has the 30 year period to pay off the amount in the variance account for the hydro financing initiative? I wonder if this is confusing and whether the amendment to subs. (3) above works… it almost seems unnecessary to say that the Board has to "take into account" this balance, given that we are setting up a bunch of very specific rules about what has to be done by various entities in order to eliminate this amount. What would the Board be expected to do with information about this variance account? For consideration.]

PART VII.3

COMPLIANCE – FAIR HYDRO FINANCING INITIATIVE

Right of the [OEB] to Inspect Books and Records,

113 (1) OEB may be given the power to investigate compliance with the legislation and the power to examine books and records, etc.

Power to Investigate Compliance and Impose Regulatory Sanctions

(2) This legislation will not limit the OEB's power to investigate compliance or prevent or preclude the OEB's power to impose sanctions. The OEB can investigate compliance with this part and to impose regulatory sanctions for non-compliance.

Limitation, Board,

(2.1) The OEB cannot, however, take any action to affect the irrevocability of the Transition Charges or the Undertaking of the Province.

Commencement

xx. This Act comes into force on [insert commencement rule]

From: Gadi Mayman
To: Scott Thompson (CAB)
Cc: Tim Schuurman (MOF); Ronald Kwan; Ken Kandeepan; Mike Manning
Subject: FW: EXTERNAL - Provincial Guarantee
Date: Monday, February 27, 2017 1:03:37 PM

Here's Ken's response, and my follow-up question to him as to why we can't do the borrowing to reduce the cost to ratepayers.

From: Gadi Mayman
Sent: Monday, February 27, 2017 1:02 PM
To: 'HARTWICK Ken -FINANCE'
Cc: 'cindy.veinot@ontario.ca' ; MAUTI John -FIN & C CTRL
Subject: RE: EXTERNAL - Provincial Guarantee

Thanks, Ken. The challenge that many on our side of the table have, including me, is that given the interest rate sensitivity of this program, we'd like to squeeze whatever excess costs we can out of it, and if we're guaranteeing the debt anyhow, why pay third party investors a premium?

I realize that the guarantee is, for now, only related to legislative changes, but that's the most likely, by far, potential point of failure of this structure, so I'd suggest that the risk transfer to third party investors is pretty limited if we have this guarantee. That being the case, I'm having trouble seeing why direct borrowing on on-lending by the Province would be treated differently from an accounting perspective than this guarantee would be, and am still wondering why we wouldn't be able to do the borrowing on your behalf?

From: HARTWICK Ken -FINANCE [mailto:ken.hartwick@opg.com]
Sent: Monday, February 27, 2017 12:49 PM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: 'cindy.veinot@ontario.ca' <cindy.veinot@ontario.ca>; MAUTI John -FIN & C CTRL <john.mauti@opg.com>
Subject: RE: EXTERNAL - Provincial Guarantee

We are looking at this now but I do not think we get a different accounting inclusion. The guarantee would not be related to performance of the trust but rather a material legislative change that would allow the trust to collect the GA and fulfil its obligations. We are looking at this now but believe the accounting works with this as one element of a 14 element test and focused on a specific change. We may issue over the paper for 130 and then need to confirm my view.

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didn't get a chance to have a discussion about why a Provincial guarantee of all of OPG's debt related to the trust isn't a problem for the accounting treatment that we'd need to get to in order to make the GA smoothing plan work, while direct borrowing and on-lending from the Province would be, if it's greater than 49% of the total borrowing (actually 44% in your current model).

From a capital markets, investor and rating agency perspective, the guarantee is extremely likely to be lumped in with the rest of the Province's debt, and the guaranteed debt would be considered just as much of a provincial obligation as the rest of our debt, particularly in this case where the reason that the guarantee is needed is because investors will demand it in order to protect themselves from legislative amendments by a future government. For that reason, it could be hard to justify, from a capital markets or cost perspective, having OPG borrowing in its own name with a government guarantee, so is it possible to revisit the potential accounting treatment and determine whether, now that we've effectively moved to a guaranteed structure, we could just have the Province, through the OFA or OEFC, do all of the borrowing and on-lend to OPG? Is this something that you'd been planning to address in the accounting material that you're sending over today?

Thanks,

Gadi

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From: Ken Kandeepan
To: Ronald Kwan; Mike Manning
Subject: FW: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 9:33:12 AM

Sorry should have cc'ed you, hopefully there will be clarification from OPG sooner rather than later.

Thanks

Ken k

-----Original Message-----
From: Ken Kandeepan
Sent: Thursday, February 16, 2017 9:19 AM
To: 'LEE John -TREASURY' <john.s.lee@opg.com>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Hi John

Gadi and others spent considerable time last night discussing the equity injection option and we are unclear as to how the Province will be made whole from a fiscal perspective. I suggest that you proceed with fleshing out this option and once we have all the details a decision can be made as to its viability. Naturally, pls include details on the external borrowing for the 51%; will the borrowing be conducted by OPG, the Trust, etc.

Thanks

Ken k

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From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, February 16, 2017 8:28 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
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Cc: Lynsey Wynberg; Ronald Kwan; Mike Manning
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> John
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> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 5:51 PM
> To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Cc: Nadine Petsche (MOF)
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Hi John and Cindy
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> I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.
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> Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.
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> The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.
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> Thanks
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> Ken k
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> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 4:50 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Thank you. Will do.
>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 4:49 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
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> Sent: Wednesday, February 15, 2017 3:43 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
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> Thank you.
> This is of utmost importance. Please advise soonest.
> Janet
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> Sent: Wednesday, February 15, 2017 3:37 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
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> My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.
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> Sent: Wednesday, February 15, 2017 1:57 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
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> Please advise on this call. Timing is important.
> A prompt response would be most appreciated,
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> Thank you,
> Janet Hahn Parker
>
> 416 592-6749
> j.hahnparker@opg.com
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> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 9:30 AM
> To: LEE John -TREASURY
> Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY
> Subject: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
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> Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.
>
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> Ken K
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> From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
> Sent: Wednesday, February 15, 2017 9:09 AM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>
> Subject: RE: OEFC Funding of the Global Adjustment Deferral
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> We can make ourselves available for a call this morning. Please advise.
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> John
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From: Ken Kandeepan
To: Ronald Kwan; Mike Manning
Subject: FW: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 9:33:12 AM

Sorry should have cc'ed you, hopefully there will be clarification from OPG sooner rather than later.

Thanks

Ken k

-----Original Message-----
From: Ken Kandeepan
Sent: Thursday, February 16, 2017 9:19 AM
To: 'LEE John -TREASURY' <john.s.lee@opg.com>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Hi John

Gadi and others spent considerable time last night discussing the equity injection option and we are unclear as to how the Province will be made whole from a fiscal perspective. I suggest that you proceed with fleshing out this option and once we have all the details a decision can be made as to its viability. Naturally, pls include details on the external borrowing for the 51%; will the borrowing be conducted by OPG, the Trust, etc.

Thanks

Ken k

-----Original Message-----
From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, February 16, 2017 8:28 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Have you had any confirmation from Gadi on the approach. As you know time is of the essence, as a result we are proceeding with discussions with the external auditors this morning to brief them on the approach and get their thoughts on the accounting implications and what needs to be done from a structuring perspective to ensure that the varying objectives can be met. Please advise ASAP.

John

-----Original Message-----
From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
Sent: Wednesday, February 15, 2017 6:37 PM
To: LEE John -TREASURY
Cc: Veinot, Cindy (TBS); Nadine Petsche (MOF); RYFA Ken -TREASURY; CHENG Alec -FIN & C CTRL
Subject: Re: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

> On Feb 15, 2017, at 6:28 PM, LEE John -TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.
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> Sent: Wednesday, February 15, 2017 5:51 PM
> To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Cc: Nadine Petsche (MOF)
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
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From:	Carlos Yep
To:	Mike Manning
Subject:	FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager
Date:	Friday, April 21, 2017 2:27:32 PM
Attachments:	Variable Return.doc Terms necessary for OPG to consolidate the Trust_Province FEB 21.docx

---

-----Original Message-----
From: Carlos Yep
Sent: Friday, April 21, 2017 2:04 PM
To: John Psinas <John.Psinas@ofina.on.ca>
Subject: FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

FYI

-----Original Message-----
From: Carlos Yep
Sent: Friday, April 21, 2017 2:02 PM
To: 'LIU Sheen -TREASURY' <sheen.liu@opg.com>
Subject: RE: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

Sheen
A few more questions on Return Benchmarks ... and "OPG must have the ability to earn variable returns by exercising its authority"

... "If the actual issuance rate for each tranche is lower than the corresponding benchmark, OPG will realize a gain, otherwise a loss. "
>>>Are you only concerned with the $5 tranche funded by OPG from external debt for each $100 Global Asset bought by the Trust

>>>How does OPG treat the $44 tranche funded by the Province as equity for each $100 Global Asset bought by the Trust - and how does it affect the variable return and benchmarking?

>>>What are you assuming for OPG's actual issuance cost on the $5 of external debt for each $100 Global Asset Bought? And how does it affect the variable return and benchmarking?

>>>What are you assuming for the Trust actual issuance cost on the $51 of external debt for each $100 Global Asset Bought? And how does it affect the variable return benchmarking?

... "OPG will realize a gain of 5bps on the sub debt (49% of the total funding requirement for the year)"
>>>why 5bps X 49% ... Are you just assuming a prorata consolidation up?
What happens to 44% funded by the Province as equity or the 51% funded by external debt

.... "Gain and loss are capped at +/-1.5% of notional amount of incremental sub-debt issuance for each year"
>>>do you mean +/-1.5% per annum
>>>Why are Gain and loss capped?
>>>Can you carry forward any losses or gains more than +/-1.5%

... "if there is a gain, OPG shall realize 80% of it; if there is a loss, OPG shall realize 20% of it"
>>>What happens to the remaining 20% of the Gain ..... is it carried forward and amortized?

>>>What happens to the remaining 80% of the Loss .... is it carried forward and amortized?

Thanks
Carlos

-----Original Message-----
From: LIU Sheen -TREASURY [mailto:sheen.liu@opg.com]
Sent: Friday, April 21, 2017 9:49 AM
To: Carlos Yep <Carlos.Yep@ofina.on.ca>
Subject: FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

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Return Benchmarks

As trust may issue both medium/long term bonds and short term papers, benchmarks based on various terms, will be established on an annual basis, with the following methodology:

Benchmarks will be established as the sum of (1) reference rate, and (2) spread.

- For bond issuance, reference rate will be GOC rate of equivalent term
- For commercial paper, reference rate will be BA rate of equivalent term
- Spread component will also be term dependant

If the actual issuance rate for each tranche is lower than the corresponding benchmark, OPG will realize a gain, otherwise a loss.

Example:

Benchmark for 10Yr issuance is established at 3.3%, with (1) GOC 10Yr rate of 2% plus (2) 10 yr spread of 130bps

OPG sub-debt to Trust: 10yr bond at 3.25%, with actual GOC 10yr rate of 1.9% and spread of 135bps

OPG will realize a gain of 5bps on the sub debt (49% of the total funding requirement for the year)

Notes:

1. Gain and loss are capped at +/-1.5% of notional amount of incremental sub-debt issuance for each year
2. If there is a gain, OPG shall realize 80% of it; if there is a loss, OPG shall realize 20% of it
3. Loss could be carried forward to offset future gain

CONFIDENTAL **Feb 21, 2017**

Ontario Power Generation

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: a. The Trust b. Any of OPG's investments in the Trust 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: 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

		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 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. 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. 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]. 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.

From:	Carlos Yep
To:	Mike Manning
Subject:	FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager
Date:	Friday, April 21, 2017 2:27:32 PM
Attachments:	Variable Return.doc Terms necessary for OPG to consolidate the Trust_Province FEB 21.docx

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-----Original Message-----
From: Carlos Yep
Sent: Friday, April 21, 2017 2:04 PM
To: John Psinas <John.Psinas@ofina.on.ca>
Subject: FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

FYI

-----Original Message-----
From: Carlos Yep
Sent: Friday, April 21, 2017 2:02 PM
To: 'LIU Sheen -TREASURY' <sheen.liu@opg.com>
Subject: RE: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

Sheen
A few more questions on Return Benchmarks ... and "OPG must have the ability to earn variable returns by exercising its authority"

... "If the actual issuance rate for each tranche is lower than the corresponding benchmark, OPG will realize a gain, otherwise a loss. "
>>>Are you only concerned with the $5 tranche funded by OPG from external debt for each $100 Global Asset bought by the Trust

>>>How does OPG treat the $44 tranche funded by the Province as equity for each $100 Global Asset bought by the Trust - and how does it affect the variable return and benchmarking?

>>>What are you assuming for OPG's actual issuance cost on the $5 of external debt for each $100 Global Asset Bought? And how does it affect the variable return and benchmarking?

>>>What are you assuming for the Trust actual issuance cost on the $51 of external debt for each $100 Global Asset Bought? And how does it affect the variable return benchmarking?

... "OPG will realize a gain of 5bps on the sub debt (49% of the total funding requirement for the year)"
>>>why 5bps X 49% ... Are you just assuming a prorata consolidation up?
What happens to 44% funded by the Province as equity or the 51% funded by external debt

.... "Gain and loss are capped at +/-1.5% of notional amount of incremental sub-debt issuance for each year"
>>>do you mean +/-1.5% per annum
>>>Why are Gain and loss capped?
>>>Can you carry forward any losses or gains more than +/-1.5%

... "if there is a gain, OPG shall realize 80% of it; if there is a loss, OPG shall realize 20% of it"
>>>What happens to the remaining 20% of the Gain ..... is it carried forward and amortized?

>>>What happens to the remaining 80% of the Loss .... is it carried forward and amortized?

Thanks
Carlos

-----Original Message-----
From: LIU Sheen -TREASURY [mailto:sheen.liu@opg.com]
Sent: Friday, April 21, 2017 9:49 AM
To: Carlos Yep <Carlos.Yep@ofina.on.ca>
Subject: FW: EXTERNAL - Re: Benchmarking and Performance for the Trust manager

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Return Benchmarks

As trust may issue both medium/long term bonds and short term papers, benchmarks based on various terms, will be established on an annual basis, with the following methodology:

Benchmarks will be established as the sum of (1) reference rate, and (2) spread.

- For bond issuance, reference rate will be GOC rate of equivalent term
- For commercial paper, reference rate will be BA rate of equivalent term
- Spread component will also be term dependant

If the actual issuance rate for each tranche is lower than the corresponding benchmark, OPG will realize a gain, otherwise a loss.

Example:

Benchmark for 10Yr issuance is established at 3.3%, with (1) GOC 10Yr rate of 2% plus (2) 10 yr spread of 130bps

OPG sub-debt to Trust: 10yr bond at 3.25%, with actual GOC 10yr rate of 1.9% and spread of 135bps

OPG will realize a gain of 5bps on the sub debt (49% of the total funding requirement for the year)

Notes:

1. Gain and loss are capped at +/-1.5% of notional amount of incremental sub-debt issuance for each year
2. If there is a gain, OPG shall realize 80% of it; if there is a loss, OPG shall realize 20% of it
3. Loss could be carried forward to offset future gain

CONFIDENTAL **Feb 21, 2017**

Ontario Power Generation

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
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	14	The spirit of the above terms should be reflected in the Trust Indenture Agreement as well as Legislation, wherever possible.

From:	Bartlett, Doug - Debt Capital Markets
To:	Mike Manning
Subject:	FW: Expert advisory panel agrees with Ontario in pension accounting issue (CIBC Capital Markets)
Date:	Tuesday, February 14, 2017 1:56:16 PM
Attachments:	Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017).pdf

Mike,
FYI.
Doug

CIBC Capital Markets
Macro Strategy Research

Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017)

Credit Implications: Potentially positive
Credit Ratings: DBRS AA(Low), Moody's Aa2, S&P A+, Fitch AA-, All outlooks stable

Yesterday, an expert accounting advisory panel engaged by the Province of Ontario to review the province's accounting practices for pension assets released its report. The report sided with the province in concluding that the province's share of the net pension assets of both the Ontario Teachers' Pension Plan (OTPP) and the Ontario Public Sector Employees' Union Pension Plan (OPSEUPP) should be recognized as an asset in Ontario's financial statements. The panel concluded that it should be reported for the following reasons:

- Recognizing the asset will provide a faithful representation of the province's financial position
- The accounting surplus in the plan has a future economic benefit
- The government controls access to that accounting surplus
- The accounting surplus exists as the result of past transactions and events
- It would be misleading not to recognize the province's share of the assets in Public Accounts.

For the full report Click Here[ontario.ca]

The implications of this conclusion is that the province will have more financial flexibility to achieve its financial targets if it chooses to return to the pension accounting treatment it had used in the past. Adopting the Auditor General's treatment has resulted in an upward adjustment to the accumulated deficit as well as higher pension expense in fiscal 2015-16 and in future years. More information about these adjustments is provided below in the "Background" section.

The Auditor General is reviewing the report and has not commented officially. For the Province of Ontario's fiscal 2015-16 results, the Auditor General issued a qualified opinion because, although the statements adopted the Auditor General's pension accounting treatment for fiscal 2015-16, it did not retroactively restate the comparative 2014-15 public accounts and, therefore, by not correcting the error in accounting treatment, it constituted a departure from Public Sector Accounting Standards (PSAS).

At the same time, the preparer of the financial statements (Treasury Board Secretariat) who felt that they were and have always been in compliance with PSAS, signed off on fiscal 2015-16 results, but only following the adoption by the Province of Ontario of the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment").

Background

In our Ontario Talking Points (January 27, 2017) research note we provided the following background information on this issue.

Could you clarify Ontario's course of action given the Auditor General of Ontario's qualified opinion on Pension Accounting?

- Although the pension expense is a non-cash charge, it is still very important to achieving the balanced budget target in Fiscal 2017-18, since Ontario's results are reported based on accrual accounting and not cash.
- The Province has engaged an expert panel of accountants to assess the issue.
- The issue being assessed is whether the Province can record an asset for the jointly sponsored plans under the accounting standards. The Province believes that an asset should be reported.
- The panel will focus on the accounting question, but will also provide advice on how to measure an asset, assuming it concludes that it should be reported. The calculation is

sensitive to management's assumptions, including the discount rate which reflects management's best estimate of long-term returns on the assets which is currently at 6.25% and consistent with rates used by most other senior Canadian governments.

- Background – Ontario Public Accounts 2015-16: In Ontario's fall fiscal and economic update, the government adopted the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment"). The impact of the change resulted in an additional $10.7bln being added to the net debt and accumulated deficit and an increase of $1.5bln to the annual deficit for 2015–16. Consistent with the accounting treatment adopted in the Public Accounts of Ontario 2015–2016, the medium-term fiscal outlook provided reflects a cautious approach to forecasting the projected annual Pension Adjustment. This cautious approach results in an estimated potential impact of $2.2bln in 2016–17, $2.8bln in 2017–18, and $3.7bln in 2018–19 to the annual Pension Adjustment.

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Expert advisory panel agrees with Ontario in pension accounting issue (February 14, 2017)

Credit Implications: Potentially positive

Credit Ratings: DBRS AA(Low), Moody's Aa2, S&P A+, Fitch AA-, All outlooks stable

Yesterday, an expert accounting advisory panel engaged by the Province of Ontario to review the province's accounting practices for pension assets released its report. The report sided with the province in concluding that the province's share of the net pension assets of both the Ontario Teachers' Pension Plan (OTPP) and the Ontario Public Sector Employees' Union Pension Plan (OPSEUPP) should be recognized as an asset in Ontario's financial statements. The panel concluded that it should be reported for the following reasons:

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For the full report Click Here

The implications of this conclusion is that the province will have more financial flexibility to achieve its financial targets if it chooses to return to the pension accounting treatment it had used in the past. Adopting the Auditor General's treatment has resulted in an upward adjustment to the accumulated deficit as well as higher pension expense in fiscal 2015-16 and in future years. More information about these adjustments is provided below in the "Background" section.

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At the same time, the preparer of the financial statements (Treasury Board Secretariat) who felt that they were and have always been in compliance with PSAS, signed off on fiscal 2015-16 results, but only following the adoption by the Province of Ontario of the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment").

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- The panel will focus on the accounting question, but will also provide advice on how to measure an asset, assuming it concludes that it should be reported. The calculation is sensitive to management's assumptions, including the discount rate which reflects management's best estimate of long-term returns on the assets which is currently at 6.25% and consistent with rates used by most other senior Canadian governments.
- Background – Ontario Public Accounts 2015-16: In Ontario's fall fiscal and economic update, the government adopted the Auditor General's accounting interpretation for the treatment of net pension assets for 2015–16 through a time-limited regulatory amendment (the "Pension Adjustment"). The impact of the change resulted in an additional $10.7bln being added to the net debt and accumulated deficit and an increase of $1.5bln to the annual deficit for 2015–16. Consistent with the accounting treatment adopted in the Public Accounts of Ontario 2015–2016, the medium-term fiscal outlook provided reflects a cautious approach to forecasting the projected annual Pension Adjustment. This cautious approach results in an estimated potential impact of $2.2bln in 2016–17, $2.8bln in 2017–18, and $3.7bln in 2018–19 to the annual Pension Adjustment.

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From:	Carlos Yep on behalf of GRECO Clara -LAWDIV
To:	Mike Manning; James Devine; Montgomery, Kaitlin (MOF); John Psinas; John Kim; Carlos Yep; YAO Anthea -FUNDMGMT; Thomas Leung (MEDTE/MRI)
Subject:	FW: Fair Hydro Plan - Equity Injection/OPG Share Purchase
Attachments:	disclaimer.html

-----Original Appointment-----
From: GRECO Clara -LAWDIV [mailto:clara.greco@opg.com]
Sent: Thursday, March 16, 2017 2:29 PM
To: GRECO Clara -LAWDIV; Montgomery, Kaitlin (MOF); John Kim; Carlos Yep; YAO Anthea -FUNDMGMT; Thomas Leung (MEDTE/MRI)
Cc: John Psinas
Subject: Fair Hydro Plan - Equity Injection/OPG Share Purchase
When: Tuesday, March 28, 2017 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: call in 1-866-276-0948 ID: 8780928#

Rescheduled as requested.

As discussed, we will regroup if needed. OFA to advise.

Thanks
Clara

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Attachments:	disclaimer.html

-----Original Appointment-----
From: GRECO Clara -LAWDIV [mailto:clara.greco@opg.com]
Sent: Tuesday, March 14, 2017 4:06 PM
To: GRECO Clara -LAWDIV; Montgomery, Kaitlin (MOF); John Kim; Carlos Yep; YAO Anthea -FUNDMGMT
Subject: Fair Hydro Plan -- Equity Injection/OPG Share Purchase
When: Thursday, March 16, 2017 1:00 PM-2:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: call in 1-866-276-0948 ID 8780928#

Proposed Agenda:

1. Goal of this working group
2. Confirmation of Participants
3. Schedule/Timeline
4. Shareholder/Province Requirements and Process to Provide Capital Injection
a. Treasury Board Appropriations
b. Other Approvals
c. Process/timing
5. OPG Requirements and Process to Obtain Capital Injection
a. Determine frequency of/amount of capital required
b. Share issue process
6. Share Redemption Process
a. Province concurrence
b. Timing/frequency
c. Process, including OPG internal approvals

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To:	Mike Manning; James Devine; Montgomery, Kaitlin (MOF); John Kim; Carlos Yep; YAO Anthea -FUNDMGMT; Thomas Leung (MEDTE/MRI); John Psinas
Subject:	FW: Fair Hydro Plan -Follow up
Attachments:	disclaimer.html

-----Original Appointment-----
From: GRECO Clara -LAWDIV [mailto:clara.greco@opg.com]
Sent: Wednesday, March 29, 2017 9:38 AM
To: GRECO Clara -LAWDIV; Montgomery, Kaitlin (MOF); John Kim; Carlos Yep; YAO Anthea -FUNDMGMT; Thomas Leung (MEDTE/MRI); John Psinas
Subject: Fair Hydro Plan -Follow up
When: Wednesday, April 05, 2017 11:00 AM-12:00 PM (UTC-05:00) Eastern Time (US & Canada).
Where: dial in 1-866-276-0948 ID: 8780928#

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From: Gadi Mayman
To: Ken Kandeepan; Mike Manning
Cc: Lynsey Wynberg
Subject: FW: GA Financing Terms
Date: Wednesday, February 15, 2017 10:01:52 AM

Mike, I don't know how much you know about this, but maybe it's time to bring you up-to-speed if you're not aware of what the government is thinking of doing on electricity rate mitigation. I'd be happy to fill you in whenever it's convenient for you. Ken has been in the loop through the piece, as it's struck me from the beginning that this is far more of an accounting issue than a funding one.

Regards,

Gadi

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 9:59 AM
To: Scott Nelms (ENERGY)
Cc: Ronald Kwan
Subject: RE: GA Financing Terms

I agree that from a funding perspective the Province, through the OFA (actually the OEFC, but that's just a detail), would be able to accommodate this, so I think it definitely becomes an accounting question. I'm under the impression that OPCD has already been linked in on this, but it would make sense to make sure that they are.

Regards,

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From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, February 15, 2017 9:56 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: GA Financing Terms

Hi Gadi,

Energy was talking with OPG yesterday about GA Financing modelling. One of the simplifying assumptions in the model is the ability to build up interest without any payments for quite long periods of time (10 years +). This contributes to the debt build up, but allows for the large, early year rate reductions.

OPG is going to reality check this based on what it thinks a 3rd party lender would expect. At a high level, they have suggested that interest capitalization would be unrealistic beyond 1 year.

What do you think is realistic if OFA acts as lender? I assume the Province may have some more flexibility, but would require terms that meet the asset test for accounting purposes. Should we link in with OPCD as well on this question?

Thanks,

Scott

Scott Nelms

Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

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scott.nelms@ontario.ca

From:	Carlos Yep
To:	John Psinas; Mike Manning; James Devine
Subject:	FW: GA financing - equity injections
Date:	Thursday, March 30, 2017 10:19:04 AM
Attachments:	2017 03 22 GA Financing - Equity Injection Discussion v02.docx

FYI

From: Leung, Thomas (MOF) [mailto:Thomas.Leung@ontario.ca]
Sent: Thursday, March 30, 2017 9:34 AM
To: John Kim ; Carlos Yep
Subject: FW: GA financing - equity injections

Carlos, Jim,

Below is the initial feedback from our corporate / controllership on the attached proposed process that you're reviewing.

Thomas.

From: Gounden, Pratima (ENERGY)
Sent: March 28, 2017 4:39 PM
To: Leung, Thomas (MOF)
Cc: Montgomery, Kaitlin (MOF)
Subject: RE: GA financing - equity injections

Hi Thomas,

Have you received any feedback from OFA on this document? Would love to see their comments.

Overall the approvals process looks fine.

Minor comments/question:

- PRRT is a four year planning cycle, could we requesting the authority to inject the equity for 4, instead of 3 years?
- We'll probably create an operating asset in Vote 2905 – this is where all the other rate mitigation items are. This I will need to confirm though.
- If Energy is making the equity injection, why are we working with MOF – is it just because you EIGS is under them now?
- Can I assume that the first equity injection would be 2018-19?

Controllership comment is that this is quite complicated and we may want to loop in OPCD and legal in early. They advised there may be a need for external expertise (accounting and legal), but I'll leave this part for now – it's probably too early for this.

Pratima

GA Financing – Equity Injection

Briefing Note

PURPOSE:

- Develop a timeline / mechanism to facilitate equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the SPV in return for cash proceeds
- In order for the SPV to finance the GA asset on a long-term will obtain financing from two sources on an ongoing basis
    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
        - **44% from equity injections from the Province**
        - 5% from capital markets
- OPG will require equity injections on an ongoing basis in order to keep its capital structure in line, and will require flexibility in order to issues shares as needed

GA FINANCING IMPLEMENTATION TIMING:

- **April:** Proposed Legislative Changes Drafted (retroactive to May 1)
- **May 1**: GA smoothing incorporated into "RRP" rates
- **Early June:** Legislation may be passed and SPV created. OPG uses short term facility to accommodate GA asset purchase [OPG TBC]. This represents the earliest possible equity injection [OPG TBC]
- **September**:
    - SPV long-term borrowing begins and would continue

POTENTIAL PROVINCIAL PROCESS FOR EQUITY INJECTIONS

<u>Required Approvals for Equity Injection in May 2017</u>

- ENERGY would seek TB/MBC approval for equity injection up to $xxM over next three years
- Seek approval to use the Operating Asset (vote xx) [ENE CORP TBC]
- Seek appropriation for $xxM in 2017-18 and Note that the out-year requests will be included in ENE's PRRT submission

<u>Ongoing Provincial Approvals Process</u>

- **Nov/Dec**: OPG includes forecasted equity injection requirements in rolling 3-year Business Plan

- **Feb/Mar**: ENERGY seeks TB/MBC approval for equity injection/OPG issuance as part of annual Business Plan concurrence process
    - ENE would seek TB/MBC approval for authority to inject up to $xx in OPG, in exchange for up to xx shares over the next 3 year term [OPG TBC: does this satisfy requirements in articles]
    - Seek approval delegating authority to Minister of Energy to work with the Ministry of Finance to execute equity injections, working with the OFA
    - Seek approval to include the 3-year equity request in ENE's PRRT submission through the operating asset in vote xx
- **Oct/Nov**: ENE would seek appropriation for out-year funding of equity injections

<u>Ongoing Implementation Process</u>

- OPG would send a letter to the Minister of Energy requesting an equity injection of $xx, in exchange for xx shares
- If Minister approves, ENE would work with OFA to flow the money [OFA TBC: Do you need something formal to do this? How much notice do you need to flow the cash? Any other mechanical requirements we should flag?]

Further Considerations

- Share Price Determination:
    - As of December 31, 2016 OPG had 256,300,010 common shares issued and outstanding at a stated value of $5,126 million ($20/share book value)
    - All new issuances would be priced at the same value as existing shares ($20/share)

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From:	Whitfield, Tobias P. (MOF)
To:	Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Malle Hanslep (MOF); Michael Waterston (MOF)
Subject:	FW: Guarantee
Date:	Friday, April 21, 2017 5:23:57 PM
Attachments:	Fair Hydro Plan Act (April 20 2017) Consultation v3(MOF Legal Comments April 21).docx

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best

Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best

Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)

Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)

Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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Version 3

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Confidential Draft

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

Confidential Draft

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7. Fair adjustment, May 1, 2018 to April 30, 2022

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

~~(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.~~

(1) The Lieutenant Governor in Council may by order authorize the Minister of Finance, on behalf of Ontario, to agree to guarantee or indemnify,

(a) any debts, obligations, securities or **[undertakings][NTD: Does this cover the performance guarantee, and how does the Province have the authority to cause the LDCs to do what is required for the collection of the amounts, or are there issues with replacement/taking control of the activities of the LDCs?]** of the **[financial asset owner].**

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Terms and conditions
(2) In respect of a guarantee or indemnity authorized under subsection (1), the Lieutenant Governor in Council may fix such terms and conditions as are considered advisable or may authorize the Minister of Finance, subject to any maximum liability specified for the guarantee or indemnity by the Lieutenant Governor in Council, to determine the terms, conditions and amount on which the guarantee or indemnity will be given.

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PART II
FAIR ADJUSTMENT

Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall

ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may

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be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

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True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

    i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

    ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with

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subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

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2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

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Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be

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borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

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Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

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Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

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Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

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3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

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(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

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Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

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(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

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Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

~~**Non-application, Financial Administration Act, s. 28**~~[7]

~~**37xx.** Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.~~**[NTD: We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.]**

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

[7] ~~Note – see s. 51 of the Electricity Act, 1998~~

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(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to

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facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a

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subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From: Hanslep, Malle (MOF)
To: Ken Kandeepan; Mike Manning; Ronald Kwan
Cc: Tobias P. Whitfield (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee
Date: Friday, April 21, 2017 2:42:00 PM
Attachments: LAWS OF THE STATE OF NEW YORK - CHAPTER 173 OF 2013.docx
summary of securitization provisions in LIPA Reform Act.docx
Summary of Duke Energy Securitization.docx
Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf
Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf
Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf
Moody"s - Duke Energy Florida Project Finance, LLC Series A Bonds.pdf
S&P - List of S&P Rated Stranded Cost Transactions (2013).pdf
S&P - Securitizing Stranded Costs_S&P Criteria (2001).pdf
Fair Hydro Plan Act (April 20 2017) Consultation v3.docx

From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:38 PM
To: Mayman, Gadi (OFA); Strathy, Anna (OFA)
Cc: Whitfield, Tobias P. (MOF); Waterston, Michael (MOF)
Subject: FW: Guarantee

Some more information sent by Carolyn.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.
Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.
This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.
Happy to answer your questions or walk you through the proposed bill.
Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,
Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.
We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.
Thanks!
Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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ASSEMBLY BILL #**A8073** SAME AS SENATE BILL #**S5844**

LAWS OF NEW YORK, 2013

CHAPTER 173

AN ACT to amend the public service law, the public authorities law, the executive law and the education law, in relation to the powers and duties of the department of public service and the Long Island power authority; to repeal subdivision (u) of section 1020-f of the public authorities law relating to general powers of the authority; and providing for the repeal of certain provisions upon expiration thereof (Part A); and in relation to the issuance of securitized restructuring bonds to refinance the outstanding debt of the Long Island power authority (Part B)

Became a law July 29, 2013, with the approval of the Governor.
Passed by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. This act enacts into law major components of legislation relating to issues deemed necessary by the state. Each component is wholly contained within a Part identified as Parts A through B. The effective date for each particular provision contained within such Part is set forth in the last section of such Part. Any provision in any section contained within a Part, including the effective date of the Part, which makes reference to a section "of this act", when used in connection with a particular component, shall be deemed to mean and refer to the corresponding section of the Part in which it is found.

Section three of this act sets forth the general effective date of this act.

PART A

Section 1. Section 3 of the public service law, as amended by chapter 8 of the laws of 2012, is amended and a new section 3-b is added to read as follows:

§ 3. Department of public service. [~~1.~~] There shall be in the state government a department of public service. The chairman of the public service commission shall be the chief executive officer of the department. He or she shall appoint and shall have the power to remove, subject to the provisions of the civil service law, all officers, clerks, inspectors, experts and employees of the department, and to approve all contracts for special service. The chairman shall designate one of the commissioners in the department or an officer of the department to act as deputy chairman during the absence or disability of the chairman and during such times such deputy chairman shall possess all the powers of the chairman as chief executive officer of the department.

[~~2. The department shall, upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of said authority pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or~~

EXPLANATION--Matter in ***italics*** is new; matter in brackets [-] is old law

to be omitted.

~~CHAP. 173 2~~

~~by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the Long Island power authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department according to such terms as the department may determine are necessary and reasonable.~~]

§ 3-b. Long Island office of the department.

1. There is hereby established in the department an office to review and make recommendations with respect to the operations and terms and conditions of service of, and rates and budgets established by, the Long Island power authority and/or its service provider.

2. Definitions. As used or referred to in this section:

(a) "Authority" means the Long Island power authority.

(b) "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract. However, the service provider and any affiliate of the service provider with whom the authority or service provider contracts to provide services associated with the authority's electric transmission and distribution system shall not be considered an electric corporation under this chapter.

(c) "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the Long Island power authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

3. General powers. In undertaking the requirements of this section, subject to subdivisions (u) and (bb) through (hh) of section one thousand twenty-f of the public authorities law, the department shall be empowered and authorized to:

(a) Review and make recommendations to the board of the Long Island power authority with respect to the rates and charges, including charges related to energy efficiency and renewable energy programs, to be established by the authority and become applicable on or after January first, two thousand sixteen pursuant to subdivision (u) of section one thousand twenty-f of the public authorities law.

(i) The purpose of such review is to make recommendations designed to ensure that the authority and the service provider provide safe and adequate transmission and distribution service at rates set at the lowest level consistent with sound fiscal operating practices.

(ii) The department's recommendations shall be designed to be consistent with ensuring that the revenue requirements related to such rate review are sufficient to satisfy the authority's obligations with respect to its bonds, notes and all other contracts.

(iii) In the context of such review, the department may not make any recommendation that would modify the compensation or fee structure included within the operations services agreement.

(iv) In undertaking such review and in making recommendations related to the proposed rates and charges, the department shall establish standards,

policies and procedures that, at a minimum, provide for public statement and evidentiary hearings and participation of intervenors and other parties, and ensure that any final recommendations related to the proposed rates and charges are provided to the authority within two hundred forty days of the filing with the department of such plan.

(v) The parties to any such rate review proceeding shall include, but not be limited to, department staff, the authority, the service provider and, to the extent it deems necessary or appropriate, the utility intervention unit.

(b) Review the annual capital expenditures proposed by the service provider and recommend such improvement in the manufacture, conveying, transportation, distribution or supply of electricity, or in the methods employed by the service provider as in the department's judgment allows for safe and adequate service.

(c) Annually review the emergency response plan of the authority and the service provider in accordance with the following requirements:

(i) Examine and determine whether the emergency response plan is consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of this chapter and any regulations or orders promulgated thereto, and to recommend amendments of same; and

(ii) Review and make recommendations to the authority with respect to the performance of the service provider in restoring service or otherwise meeting the requirements of the emergency response plan during an emergency event, defined for purposes of this section as an event where widespread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and its service provider, including making determinations with respect to whether the service provider is reasonably able to implement the emergency response plan, whether the length of any outages related to such emergency were materially longer than they would otherwise have been because the service provider failed to reasonably implement the emergency response plan, the reasonableness of costs associated with such emergency response, the costs, if any, that were unreasonably and imprudently incurred by the service provider, and whether the service provider would be liable for any such costs pursuant to the terms and conditions of the operations services agreement.

(d) Upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of the authority and service provider pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department

according to such terms as the department may determine are necessary and reasonable.

(e) Accept, investigate, mediate to resolve and make recommendations to the Long Island power authority and/or the service provider regarding the resolution of complaints from consumers in the authority's service

territory relating to, among other things, the provision of electric service provided by the service provider and/or the authority.

(f) Review the net metering program implemented under subdivision (h) of section one thousand twenty-g of the public authorities law and make recommendations designed to ensure consistency with the requirements of sections sixty-six-j and sixty-six-l of this chapter, and any regulations and orders adopted thereto.

(g) Review and make recommendations with respect to any proposed plan submitted by the Long Island power authority and/or the service provider related to implementation of energy efficiency measures, distributed generation or advanced grid technology programs having the purpose of providing customers with tools to more efficiently and effectively manage their energy usage and utility bills, and improving system reliability and power quality.

(h) Review the data, information and reports submitted pursuant to subdivision (hh) of section one thousand twenty-f of the public authorities law and other pertinent information related to the metrics in the operations services agreement, the Long Island power authority's evaluation of such data, information and reports, and make recommendations to the authority with respect to the service provider's annual incentive based compensation within thirty days of receipt of such evaluation and information.

4. Review and inspection. To undertake the requirements of subdivision two of this section, the department shall be authorized to inspect all premises and facilities owned or operated by the authority and the service provider, review all books and records of the authority and the service provider, interview all appropriate personnel, and require annual reporting consistent with the requirements of subdivision six of section sixty-six of this chapter and any regulations and orders adopted thereto; provided, however, that this authority shall not extend to affiliates of the service provider.

§ 2. Subdivision 2 and paragraph (b) of subdivision 6 of section 18-a of the public service law, subdivision 2 as amended by section 2 of part NN of chapter 59 of the laws of 2009 and paragraph (b) of subdivision 6 as amended by section 1 of part BB of chapter 59 of the laws of 2013, are amended and a new subdivision 1-a is added to read as follows:

1-a. All costs and expenses of the department related to the department's responsibilities under section three-b of this chapter shall be paid pursuant to appropriation on the certification of the chairman of the department and upon the audit and warrant of the comptroller. For the state fiscal year beginning on April first, two thousand fourteen and each state fiscal year thereafter, payments are to be made from all moneys collected from the Long Island power authority pursuant to this section. The total of such costs and expenses shall be assessed on such authority in the manner provided in subdivisions two, three and four of this section.

2. (a) The chairman of the department shall estimate prior to the start of each state fiscal year the total costs and expenses, including the compensation and expenses of the commission and the department, their officers, agents and employees, and including the cost of retirement contributions, social security, health and dental insurance, survivor's benefits, workers' compensation, unemployment insurance and other fringe

benefits required to be paid by the state for the personnel of the commission and the department, and including all other items of maintenance and operation expenses, and all other direct and indirect costs. Based on such estimates, the chairman shall determine the amount

to be paid by each assessed public utility company **and the Long Island power authority** and a bill shall be rendered to each such public utility company **and authority**.

(b) The bill for each public utility company **and the Long Island power authority** shall be rendered on or before February first preceding each fiscal year, and shall be for the amount equal to the product of the aforesaid estimated costs and expenses of conducting the department's and commission's total operations during the fiscal year for which billing is being made multiplied by the proportion which compares:

(1) the gross operating revenues, over and above five hundred thousand dollars, for that utility company **or the authority** derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman, to:

(2) the total of the gross operating revenues, derived from intrastate utility operations for all utility companies **and the authority** in the state which revenues are included under subparagraph one of this paragraph.

For the purposes of calculating the commodity cost component of its gross operating revenue, where the utility delivers to end-use customers electricity and/or natural gas commodities that are sold to such customers by a third party, such utility shall include in its revenues an estimate of the sales revenue for the electric and/or natural gas commodities that it delivers, including all such commodities sold to end-use customers by third parties, in such manner as to assure that all end-use delivery customers, regardless of the entity from which they purchase their electric and/or natural gas commodities, bear a fair and proportionate share of the assessment imposed herein, as the commission may determine.

(c) The minimum assessment for any utility company**, as well as the Long Island power authority,** whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

(d) The amount of such bill for fiscal years beginning on or after April first, nineteen hundred eighty-three so rendered shall be paid by such public utility company **and such authority** to the department on or before April first; provided, however, that [~~a~~] **any such** utility company **or such authority** may elect to make partial payments for such costs and expenses on March tenth of the preceding fiscal year and on September tenth of such fiscal year. Each such partial payment shall be a sum equal to fifty percentum of the estimate of costs and expenses to be assessed against such utility company **or authority** under the provisions of this subdivision and shall not be less than two hundred dollars.

(e) During the course of any state fiscal year, the chairman may increase or decrease the estimate of costs and expenses. In such case, revised bills shall be sent to each public utility company **and such authority**, and such increase or decrease shall be equally apportioned against the remaining payments for such fiscal year.

(f) On or before October tenth of each year, the chairman shall compute the actual costs and expenses of the department and the commission and adjustments or other corrections as needed for the preceding state fiscal year and, after deducting the amounts recovered pursuant to subdivisions three and four of this section, shall, on or before October twentieth, send to each public utility company **and/or the authority** affected thereby a

statement setting forth the amount due and payable by, or the amount standing to the credit of, such public utility company **and/or the authority**. Any amount owing by any public utility company

and/or the authority shall be paid not later than thirty days following the date such statement is received. Any such amount standing to the credit of any public utility company shall be refunded by the commission or, at the option of such utility company, shall be applied as a credit against any succeeding payment due.

(g) The total amount which may be charged to any public utility company **and the Long Island power authority** under authority of this subdivision for any state fiscal year shall not exceed one per centum of such public utility company's **or authority's** gross operating revenues derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman; provided, however, that no corporation or person that is subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the general assessment provided for under this subdivision.

Notwithstanding the provisions of subdivision one of this section, for telephone corporations as defined in subdivision seventeen of section two of this article, the total amount which may be charged such corporations for department expenses under the authority of subdivision one of this section for any state fiscal year shall not exceed one-third of one percentum of such corporation's gross operating revenue, over and above five hundred thousand dollars, derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman.

(h) On-bill recovery charges billed pursuant to section sixty-six-m of this chapter shall be excluded from any determination of an entity's gross operating revenues derived from intrastate utility operations for purposes of this section.

(b) The temporary state energy and utility service conservation assessment shall be based upon the following percentum of the utility entity's gross operating revenues derived from intrastate utility operations in the last preceding calendar year, minus the amount, if any, that such utility entity is assessed pursuant to subdivisions one and two of this section for the corresponding state fiscal year period: (1) two percentum for the state fiscal year beginning April first, two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) one and three-quarters percentum for the state fiscal year beginning April first, two thousand fifteen; and (3) one and one-half percentum for the state fiscal year beginning April first, two thousand sixteen. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, utility entities shall make a payment equal to one-half of the assessment paid by such entities pursuant to this paragraph for the state fiscal year beginning on April first, two thousand sixteen. With respect to the Long Island power authority, the temporary state energy and utility service conservation assessment shall be based upon the following percentum of such authority's gross operating revenues derived from intrastate utility operations in the last preceding calendar year**, minus the amount, if any, that such authority is assessed pursuant to subdivisions one-a and two of this section for the corresponding state fiscal year period**: (1) one percentum for the state fiscal year beginning April first,

two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) three- quarters of one percentum for the state fiscal year beginning April

first, two thousand fifteen; and (3) one-half percentum for the state fiscal year beginning April first, two thousand sixteen**; provided, however, that should the amount assessed by the department for costs and expenses pursuant to such subdivisions equal or exceed such authority's temporary state energy and utility service conservation assessment for a particular fiscal year, the amount to be paid under this subdivision by such authority shall be zero**. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, the Long Island power authority shall make a payment equal to one-half of the assessment it paid for the state fiscal year beginning on April first, two thousand sixteen. No corporation or person subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the temporary state energy and utility service conservation assessment provided for under this subdivision. Utility entities whose gross operating revenues from intrastate utility operations are five hundred thousand dollars or less in the preceding calendar year shall not be subject to the temporary state energy and utility service conservation assessment. The minimum temporary state energy and utility service conservation assessment to be billed to any utility entity whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

§ 3. Section 1020-b of the public authorities law is amended by adding two new subdivisions 23 and 24 to read as follows:

23. "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract.

24. "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

§ 4. Section 1020-d of the public authorities law, as added by chapter 506 of the laws of 1995, is amended to read as follows:

§ 1020-d. [~~Trustees~~] **Board of trustees**.

1. [~~The~~] **Starting on January first, two thousand fourteen, the board of the** authority shall **be constituted and** consist of [~~fifteen~~] **nine** trustees all of whom shall be residents of the service area, [~~nine~~] **five** of whom shall be appointed by the governor, one of whom the governor shall designate as [~~chairman~~] **chair**, and serve at his **or her** pleasure, [~~three~~] **two** of whom shall be appointed by the temporary president of the senate, and [~~three~~] **two** of whom shall be appointed by the speaker of the assembly. [~~Two~~] **One** of the governor's appointees shall serve an initial term of [~~one year~~] **two years**; [~~two~~] **one** of the governor's appointees shall serve an initial term of [~~two~~] **three** years; [~~two~~] **and three** of the governor's appointees shall serve an initial term of [~~three~~] **four** years[~~; and three of the governor's appointees shall serve an initial term of four years~~]. [~~Two~~] **One** of the appointees of the temporary president of the senate and [~~two~~] **one** of the appointees of the speaker of the assembly shall serve initial terms of [~~one year~~] **two years**;

and one appointee of the temporary president of the senate and one appointee of the speaker of the assembly shall serve initial terms of [~~two~~] **three** years. Thereafter, all terms

shall be for a period of four years. In the event of a vacancy occurring in the office of trustee by death, resignation or otherwise, the respective appointing officer shall appoint a successor who shall hold office for the unexpired portion of the term.

2. No trustee shall receive a salary, but each shall be entitled to reimbursement for reasonable expenses in the performance of duties assigned hereunder.

3. Notwithstanding the provisions of any other law, no trustee, officer or employee of the state, any state agency or municipality appointed a trustee shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of a trusteeship on the authority, his or her service thereon or his or her employment therewith.

4. All trustees appointed under this section shall have relevant utility, corporate board or financial experience.

§ 5. On or before December 1, 2013 the governor, the temporary president of the senate and the speaker of the assembly shall choose and announce their appointments to the board of the Long Island power authority to be made pursuant to section 1020-d of the public authorities law, as amended by section four of this act, giving due consideration to continuity of business. The board of trustees of the Long Island power authority in existence on December 31, 2013, shall be abolished on such date and be constituted on January 1, 2014 pursuant to section 1020-d of the public authorities law, as amended by section four of this act.

§ 6. Subdivision (u) of section 1020-f of the public authorities law is REPEALED.

§ 7. Subdivisions (c) and (bb) of section 1020-f of the public authorities law, subdivision (c) as amended by chapter 506 of the laws of 2009 and subdivision (bb) as added by chapter 8 of the laws of 2012, are amended and seven new subdivisions (u), (cc), (dd), (ee), (ff), (gg) and (hh) are added to read as follows:

(c) To appoint officers, agents and employees, without regard to any personnel or civil service law, rule or regulation of the state and in accordance with guidelines adopted by the authority, prescribe their duties and qualifications and fix and pay their compensation [~~**, provided, however, that the appointment of the chief executive officer shall be subject to confirmation by the senate in accordance with section twenty-eight hundred fifty-two of this chapter;**~~]**. By January first, two thousand fourteen, the authority, through its governance committee, shall amend such guidelines to require that staffing at the authority is kept at levels only necessary to ensure that the authority is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and oversee the activities of the service provider**;

(u) Rate plans. Subject to subdivision six of section one thousand twenty-k of this title to fix rates and charges for the furnishing or rendition of gas or electric power or of any related service at the lowest level consistent with sound fiscal and operating practices of the authority and which provide for safe and adequate service. In implementing this power:

1. The authority and the service provider shall, on or before February first, two thousand fifteen, submit for review to the department of public service a three-year rate proposal for rates and charges to take effect on or after January first, two thousand sixteen.

2. The authority and the service provider shall thereafter submit for review to the department of public service any rate proposal that would increase the rates and charges and thus increase the aggregate revenues of the authority by more than two and one-half percent to be measured on an annual basis; provided, however, that the authority may place such rates and charges into effect on an interim basis, subject to prospective rate adjustment; provided, further, that a final rate plan issued by the authority that would not so increase such rates and charges shall not be subject to the requirements of paragraph four of this subdivision and shall be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The authority and/or the service provider may otherwise submit for review to such department any rate proposal irrespective of its effect on revenues.

3. The authority shall not fix any final rates and charges proposed that would not be subject to review by the department of public service pursuant to paragraphs one and two of this subdivision until after holding public hearings thereon upon reasonable public notice, with at least one such hearing to be held each in the county of Suffolk and the county of Nassau.

4. Any recommendations associated with a rate proposal submitted pursuant to paragraphs one and two of this subdivision shall be provided by the department of public service to the board of the authority immediately upon their finalization by the department. Unless the board of the authority makes a preliminary determination in its discretion that any particular recommendation is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligations, or the provision of safe and adequate service, the board shall implement such recommendations as part of its final rate plan and such final determination shall be deemed to satisfy the requirements of this subdivision and be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The board shall make any such preliminary determination of inconsistency within thirty days of receipt of such recommendations, with notice and the basis of such determination being provided to the department of public service, and contemporaneously posted on the websites of the authority and its service provider. The board shall thereafter, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency.

At such hearing, the department of public service shall present the basis for its recommendations, the board shall present the basis for its determination of inconsistency and the service provider may present its position. The authority and the service provider may, during the time period before such public hearing reach agreement with the department on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementation with respect to any such recommendations. The authority's final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(bb) Comprehensive and regular management and operations audits.

1. The authority **and the service provider** shall cooperate in the undertaking and completion of a regular and comprehensive management and operations audit conducted pursuant to the requirements of this subdivision and [~~subdivision two of section three~~] **paragraph (d) of subdivision three of section three-b** of the public service law. Such audit shall review and evaluate the [~~authority's~~] overall operations and management

of the authority and service provider, including [~~the authority's~~] such operations and management in the context of [~~its~~] the authority's duty to set rates at the lowest level consistent with standards and procedures provided in subdivision (u) of this section, and include, but not be limited to: (i) the [~~authority's~~] service provider's construction and capital program planning in relation to the needs of [~~its~~] customers for reliable service; (ii) the overall efficiency of the authority's and service provider's operations; (iii) the manner in which the authority is meeting its debt service obligations; (iv) the authority's Fuel and Purchased Power Cost Adjustment clause and recovery of costs associated with such clause; (v) the authority's and service provider's annual budgeting procedures and process; (vi) the application, if any, of the performance metrics designated in the operations services agreement and the accuracy of the data relied upon with respect to such application; and [~~(vi)~~] (vii) the authority's compliance with debt covenants.

2. The department of public service shall notify the authority that said department is in the process of initiating a comprehensive management and operations audit as described in paragraph one of this subdivision in a manner that ensures the timeliness of such audit, and in accordance with the following timeframe: the first comprehensive management and operations audit shall be initiated as of the effective date of [~~this subdivision~~] chapter eight of the laws of two thousand twelve and undertaken in a manner and to an extent that is practicable in the context of the authority's transition to a new management service structure; the second comprehensive management and operations audit shall be initiated no later than December fifteenth, two thousand [~~fifteen~~] sixteen; and all additional comprehensive management and operations audits shall be initiated at least once every five years thereafter.

Within a reasonable time after such notification to the authority, said department or the independent auditor retained by the authority to undertake such audit shall hold public statement hearings, with proper notice, in both Nassau and Suffolk counties for the purpose of receiving both oral and written comments from the public on matters related to such audit as described in paragraph one of this subdivision.

3. Each such audit shall be completed within eighteen months of initiation absent an extension for good cause shown by the department of public service or the independent auditor under contract with the authority with notice of such extension to the governor, the temporary president of the senate, the speaker of the assembly, and the chairs of the authority and the department of public service. Such audit shall be provided to the board of the authority immediately upon its completion.

The department of public service shall provide notice of completion of such audit to the governor, the temporary president of the senate, the speaker of the assembly, and the minority leaders of the senate and assembly, and the authority, upon receipt of such audit, shall post a copy of such audit, including findings and recommendations, on its website and the website of the service provider. Unless the board of the authority makes a preliminary determination that any particular finding or recommendation contained in such audit is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligation, or the provision for safe and adequate service, the board shall implement or cause its service provider to implement such findings and recommendations in accordance with the timeframe specified under such audit.

4. The board of the authority shall make any preliminary determination of inconsistency with respect to any such finding or recommendation

within thirty days of receipt of the audit, with notice and the basis of such determination being provided to the department of public service.

Such notice and basis shall be posted contemporaneously on the authority's website **and the website of the service provider** and the board shall, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency. At such hearing the department of public service or the independent auditor responsible for undertaking such audit shall present the basis for its findings and recommendations and the board shall present the basis for its determination of inconsistency **and the service provider may present is position**. The authority**, service provider** and auditor may during the time period prior to such public hearing reach agreement on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementations with respect to any such findings and/or recommendations. The [~~**board's**~~] **authority's** final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(cc) To prepare an emergency response plan pursuant to this subdivision. 1. The service provider shall, in consultation with the authority, prepare and maintain an emergency response plan (i) to assure the reasonably prompt restoration of service in the case of an emergency event, defined for purposes of this subdivision as an event where wide-spread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and the service provider, (ii) consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of the public service law and any regulations and orders adopted thereto, and (iii) establishing the separate responsibilities of the authority and service provider.

2. On or before February third, two thousand fourteen, the authority and service provider shall submit an emergency response plan to the department of public service for review. Contemporaneously with such submission, the authority shall provide notice of such proposed plan to the secretary of state for publication in the state register, the authority and service provider each shall post such plan on their websites and otherwise make such plan available for review in-person, and afford members of the public an opportunity to submit written comments and oral comments pursuant to at least one hearing to be held each in the county of Suffolk and the county of Nassau. Such written comments must be submitted by March fourteenth, two thousand fourteen.

The authority and service provider shall provide a copy of all written comments they receive and a transcript of such public hearings to the department of public service for its consideration in reviewing the emergency response plan. The department shall provide any recommendations to the authority and service provider with respect to such plan on or before April fifteenth, two thousand fourteen. Such plan must be made final by June second, two thousand fourteen. For each year thereafter, the service provider shall submit an emergency response plan to the department of public service, and such department shall provide its recommendations, in accordance with a schedule to be established by such department and that is consistent with the schedule associated with such department's review of similar such plans provided by electric corporations pursuant to subdivision twenty-one of section sixty-six of the public service law.

3. By June second, two thousand fourteen, and by June first annually thereafter, the authority and service provider shall jointly certify to the department of homeland security and emergency services that the emergency response plan ensures, to the greatest extent feasible, the timely and safe restoration of energy services after an emergency consistent with the requirements of paragraph (a) of subdivision twenty-one of the public service law and the department's recommendations. The filing of such emergency response plan shall also include a copy of all written mutual assistance agreements among utilities. The authority and service provider shall file with the county executives of Nassau and Suffolk county and the mayor of the city of New York the most recent version of the emergency response plan, and make sure that such amended versions are timely filed.

4. Starting in calendar year two thousand fourteen, the service provider annually shall undertake at least one drill to implement procedures to practice its emergency response plan. The service provider shall notify and allow participation in such drill of all appropriate municipal emergency responders and officials.

5. If, during an emergency event, electric service is not restored in three days, the service provider shall within sixty days from the date of full restoration file with the department a report constituting a review of all aspects of the preparation and system restoration performance during the event, and shall thereafter take into consideration any recommendations made by the department associated with such review.

(dd) On or before January first, two thousand fifteen, and by January first of each calendar year thereafter, to submit for review to the department of public service a report detailing the service provider's planned capital expenditures.

(ee) On or before July first, two thousand fourteen, and annually thereafter, to submit for review to the department of public service any proposed plan related to implementing energy efficiency measures, distributed generation or advanced grid technology programs for the purpose provided pursuant to paragraph (g) of subdivision three of section three-b of the public service law.

(ff) To assist and cooperate with the department of public service with respect to any review undertaken pursuant to section three-b of the public service law, including providing the department with reasonable access to all facilities and premises owned or operated by the authority or its service provider, allowing review of all books and records of the authority and its service provider, providing copies of requested documents, allowing interviews of all appropriate personnel, and responding in a reasonable and timely manner to any inquiries or reporting requests made by the department; provided, however, that the obligations set forth in this subdivision shall not extend to affiliates of the service provider.

(gg) Renewable generation and energy efficiency programs. 1. The authority in coordination with the service provider, the power authority of the state of New York and the New York state energy research and development authority shall, to the extent the authority's rates are sufficient to provide safe and adequate transmission and distribution service, and the measures herein, undertake actions to design and administer renewable energy and energy efficiency measures in the service area, with the goal of continuing and expanding such measures that cost-effectively reduce system-wide peak demand, minimize long-term fuel price risk to rate payers, lower emissions, improve environmental quality, and seek to meet New York state climate change and environmental

goals. Such actions shall also include implementation of any renewable energy competitive procurement or feed-in-tariff programs that were approved by the authority as of the effective date of the chapter of the laws of two thousand thirteen which added this subdivision.

2. The service provider shall consider, consistent with maintaining system reliability, renewable generation and energy efficiency program results and options in establishing capital plans.

(hh) Starting in calendar year two thousand fifteen, the authority and the service provider shall submit to the department of public service for review, any and all data, information and reports which set forth the service provider's actual performance related to the metrics in the operations services agreement, including the authority's evaluation thereof, no less than forty-five days prior to the authority's determination of the service provider's annual incentive compensation.

§ 8. Section 1020-q of the public authorities law, as added by chapter 517 of the laws of 1986 and subdivision 2 as amended by section 19 of part Y of chapter 63 of the laws of 2000, is amended to read as follows:

§ 1020-q. Payments in lieu of taxes. 1. Each year after property theretofore owned by LILCO is acquired by the authority by any means authorized by this title and, as a consequence, is removed from the tax rolls, the authority shall make payments in lieu of taxes to municipalities and school districts equal to the taxes and assessments which would have been received from year to year by each such jurisdiction if such acquisition had not occurred, [~~except for such taxing jurisdictions which tax the Shoreham plant,in which case the in lieu of tax payments shall in the first year after the acquisition be equal to one hundred percent of the taxes and assessments which would have been received by such taxing jurisdictions. In each succeeding year such in lieu of tax payments shall be decreased by ten percent until such time as such payments equal taxes and assessments which would have been levied on such plant in a nonoperative state~~] provided, however, that for the calendar year starting on January first, two thousand fifteen, and for each calendar year thereafter, such payments in lieu of taxes shall not exceed the in lieu of tax payments made to such municipalities and school districts in the immediately preceding year by more than two percent.

2. The authority shall also make payments in lieu of taxes for those taxes which would otherwise be imposed [~~upon LILCO, if LILCO were to continue in operation,~~] pursuant to sections one hundred eighty-six-a and one hundred eighty-six-c of the tax law, and to former [~~sections one hundred eighty-six and~~] section one hundred eighty-six-b of the tax law as such [~~sections one hundred eighty-six and one hundred eighty-six-b were~~] section was in effect on December thirty-first, nineteen hundred ninety-nine, [~~paragraph (b) of subdivision four of section one hundred seventy-four of the navigation law,~~] and any taxes imposed by a city pursuant to the authorization granted by section twenty-b of the general city law.

3. No municipality or governmental subdivision, including a school district or special district, shall be liable to the authority or any other entity for a refund of property taxes originally assessed against the Shoreham plant. Any judicial determination that the Shoreham plant assessment was excessive, unequal or unlawful for any of the years from nineteen hundred seventy-six to the effective date of this title shall not result in a refund by any taxing jurisdiction of taxes previously paid by LILCO pursuant to such Shoreham plant assessment. The authority shall discontinue and abandon all proceedings, brought by its predecessor

in interest, which seek the repayment of all or part of the taxes assessed against the Shoreham plant.

§ 9. Subdivision 1 of section 1020-s of the public authorities law, as amended by chapter 388 of the laws of 2011, is amended to read as follows:

1. The rates, services and practices relating to the electricity generated by facilities owned or operated by the authority shall not be subject to the provisions of the public service law or to regulation by, or the jurisdiction of, the public service commission, except to the extent (a) article seven of the public service law applies to the siting and operation of a major utility transmission facility as defined there-in, (b) article ten of such law applies to the siting of a generating facility as defined therein, [~~and~~] (c) section eighteen-a of such law provides for assessment for certain costs, property or operations**, and (d) to the extent that the department of public service reviews and makes recommendations with respect to the operations and provision of services of, and rates and budgets established by, the authority pursuant to section three-b of such law**.

§ 10. Section 1020-w of the public authorities law, as added by chapter 517 of the laws of 1986, is amended to read as follows:

§ 1020-w. Audit and annual reports. The accounts of the authority shall be subject to the supervision of the state comptroller and an annual audit shall be performed by an independent certified accountant selected by the [~~state division of the budget~~] **authority, upon recommendation of its finance and audit committee**. The authority shall submit annually to the governor, the state comptroller, the temporary president of the senate, the speaker of the assembly and the county executives and governing bodies of the counties of Suffolk and Nassau, a detailed report pursuant to the provisions of section two thousand eight hundred of [~~title one of article nine of~~] this chapter, which report shall be verified by the chairman of the authority. The authority shall comply with the provisions of sections two thousand eight hundred one, two thousand eight hundred two and two thousand eight hundred three of [~~title one of article nine of~~] this chapter.

§ 11. Section 1020-cc of the public authorities law, as amended by chapter 413 of the laws of 2011, is amended to read as follows:

§ 1020-cc. Authority subject to certain provisions contained in the state finance law, the public service law, the social services law and the general municipal law.

1. All contracts of the authority shall be subject to the provisions of the state finance law relating to contracts made by the state. The authority shall also establish rules and regulations with respect to providing to its residential gas, electric and steam utility customers those rights and protections provided in article two and sections one hundred seventeen and one hundred eighteen of the public service law and section one hundred thirty-one-s of the social services law. The authority shall conform to any safety standards regarding manual lockable disconnect switches for solar electric generating equipment established by the public service commission pursuant to subparagraph (ii) of paragraph (a) of subdivision five and subparagraph (ii) of paragraph (a) of subdivision five-a of section sixty-six-j of the public service law. The authority shall let contracts for construction or purchase of supplies, materials, or equipment pursuant to section one hundred three and paragraph (e) of subdivision four of section one hundred twenty-w of the general municipal law.

2. The authority and service provider shall provide to the state comptroller on March thirty-first and September thirtieth of each year a

report documenting each contract in excess of two hundred fifty thousand dollars per year entered into with a third party and related to management

and operation services associated with the authority's electric transmission and distribution system, including the name of the third party, the contract term and a description of services or goods to be procured, and post such report on each of their websites. All contracts entered into between the service provider and third parties are not subject to the requirements of subdivision one of this section.

§ 12. Paragraph (b) of subdivision 4 of section 94-a of the executive law, as amended by chapter 8 of the laws of 2012, is amended to read as follows:

(b) The utility intervention unit shall have the power and duty to:

(i) on behalf of the secretary, initiate, intervene in, or participate in any proceedings before the public service commission **or the department of public service**, to the extent authorized by sections **three-b,** twenty-four-a, seventy-one, eighty-four or ninety-six of the public service law or any other applicable provision of law, where he or she deems such initiation, intervention or participation to be necessary or appropriate;

(ii) represent the interests of consumers of the state before federal, state and local administrative and regulatory agencies engaged in the regulation of energy services; [~~and~~]

(iii) accept and investigate complaints of any kind from Long Island power authority consumers, attempt to mediate such complaints where appropriate directly with such authority and refer complaints to the appropriate state or local agency authorized by law to take action with respect to such complaints[~~.~~]**; and**

(iv) hold regular forums in each of the service territories of the combination gas and electric corporations, as defined under section two of the public service law, and the Long Island power authority to educate consumers about utility-related matters and the regulatory process, opportunities to lower energy costs, including through energy efficiency and distributed generation, and other matters affecting consumers.

§ 13. Notwithstanding section 112 of the state finance law and notwithstanding any other provision of law to the contrary, including but not limited to any provision of law related to rebidding, letting or amending contracts of any amount, the Long Island Lighting Company dba LIPA is authorized to amend the operations services agreement, dated December 28, 2011, entered into with PSEG Long Island LLC, including Amendment Nos. 1 and 2 thereto, approved on June 27, 2012, solely by the following: (1) upon review and written recommendations made by the department of public service to the board of trustees of the Long Island power authority ("authority"), setting forth the reasons for and findings underlying such recommendations; and (2) adoption of a resolution by a majority of the authority's board of trustees.

§ 14. This act shall supersede the fifth project condition established in Resolution No. 97-LI-1 of the public authorities control board, dated July 16, 1997, related to the implementation of certain rate increases.

§ 15. Subdivision l of section 7208 of the education law, as amended by chapter 994 of the laws of 1971, is amended to read as follows:

l. The practice of engineering or land surveying, or using the title "engineer" or "surveyor" **(i)** exclusively as an officer or employee of a public service corporation by rendering to such corporation such services in connection with its lines and property which are subject to supervision with respect to the safety and security thereof by the

public service commission of this state, the interstate commerce commission or other federal regulatory body and so long as such person is thus actually and exclusively employed and no longer**, or (ii) exclusively as an officer or**

employee of the Long Island power authority or its service provider, as defined under section three-b of the public service law, by rendering to such authority or provider such services in connection with its lines and property which are located in such authority's service area and so long as such person is thus actually and exclusively employed and no longer;

§ 16. Repowering. If after the Long Island power authority, or its successor, determines, in accordance with the terms and conditions contained in the amended and restated power supply agreement ("A&R PSA"), dated October 10, 2012, between the authority and the owner of the legacy LILCO power generating facilities, that repowering any such generating facility is in the best interests of its ratepayers and will enhance the authority's ability to provide a more efficient, reliable and economical supply of electric energy in its service territory, consistent with the goal of improving environmental quality, the authority will exercise its rights under the A&R PSA related to repowering such facility, and shall enter into an agreement related to payments in lieu-of-taxes for a term commensurate with any power purchase agreement entered into related to such repowered facility, consistent with other such agreements related to generating facilities under contract to the authority in the service territory.

§ 17. This act shall take effect January 1, 2014; provided, however, that section twelve of this act shall take effect April 1, 2014, sections five, ten, eleven, thirteen, fourteen, fifteen and sixteen of this act shall take effect immediately; provided further that section thirteen of this act shall expire and be deemed repealed January 1, 2015; and provided further that the amendments to subdivision 6 of section 18-a of the public service law made by section two of this act shall not affect the repeal of such subdivision and shall be deemed repealed therewith.

PART B

Section 1. Legislative findings. The legislature hereby finds and determines:

1. On May 28, 1998, Long Island Power Authority (the authority) acquired all the capital stock and associated assets, including transmission and distribution (T&D) system assets of Long Island Lighting Company (LILCO) which does business as the retail electric utility on Long Island, New York under the name of LIPA. In connection with that acquisition, the authority took over ultimate responsibility for providing electric utility service to residential, commercial, industrial, nonprofit and governmental customers in the counties of Suffolk and Nassau and a portion of the county of Queens (hereinafter referred to as the "service area"). Such acquisition effectively converted LILCO from an investor-owned utility that was comprehensively regulated by the New York Public Service Commission (PSC) and the United States Federal Energy Regulatory Commission (FERC), to a municipal utility that is not comprehensively regulated either by the PSC or FERC.

2. Since May 28, 1998, neither the authority nor LIPA has directly operated or maintained the T&D system assets, provided electric service or billed and collected T&D rates from LIPA's customers; instead, the authority and LIPA have contracted out virtually all of these activities

to other companies. Most of these operations and service responsibilities have been contracted out to affiliates of a company now known as National Grid plc (National Grid), a multi-national electric and gas utility company organized under the laws of England and Wales pursuant to a management services agreement. Thus, while the LIPA name appears on customer bills as well as on service trucks and other equipment used in the service area,

affiliates of National Grid have been principally in charge of management and operation of the T&D system assets and providing electricity to consumers in the service area. The authority and LIPA have now contracted with affiliates of Public Service Enterprise Group and Lockheed Martin Services Inc. (PSEG-Lockheed) to provide operation and maintenance services for the T&D system assets for ten years starting January 1, 2014, when the National Grid contract expires.

3. High costs of electric utility service poses a serious threat to the economic well-being, health and safety of the residents of and the commerce and industry in the service area. High costs of electric utility service deter commerce and industry from locating in the service area and have caused existing commerce and industry to consider seriously moving out of the service area.

4. High debt and associated debt service contribute to the authority's high electric rates. The authority has approximately seven billion dollars in outstanding debt, a substantial portion of which was issued to refinance debt associated with construction of the now abandoned Shoreham nuclear power plant. The annual debt service associated with such bonds puts pressure on the authority's customer rates.

5. As of December 31, 2012, the three major rating agencies generally rated the authority's debt in the single-A range, though Moody's Investors Services assigns approximately seven hundred million dollars of the authority's debt slightly lower ratings of Baa1 and Baa2.

6. If securitized restructuring bonds were issued by a bankruptcy-remote entity with a AAA or equivalent rating in current market conditions to finance a portion of the costs of purchasing, redeeming or defeasing outstanding debt of the authority, and other associated costs, the debt service on the authority's debt could be reduced and the costs of electric utility service could be lowered.

7. Securitized restructuring bonds are likely to be most attractive to the investing public and result in the lowest possible yields if they are issued by a newly organized, special purpose public benefit corporation or other corporate municipal instrumentality of the state.

8. The purpose of this act is to provide a legislative foundation for the issuance of securitized restructuring bonds to refinance outstanding debt of the authority, a significant portion of which relates to LILCO's costs of constructing and financing the now abandoned Shoreham nuclear power plant, including the creation of restructuring property by the authority to provide for the redemption or defeasance of a portion of the outstanding debt of the authority. It is the intent of the legislature to authorize, for the purpose of reducing electric utility costs to consumers in the service area, the following: (a) the organization of a restructuring bond issuer as a special purpose corporate municipal instrumentality of the state, created for the limited purpose of issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt of the authority and associated costs, which securitized restructuring bonds create no new financial obligations or liabilities for the authority or for the state; and (b) implementation of contracts with owners of the securitized restructuring bonds through a

statutory pledge and agreement that the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds until those bonds are no longer outstanding and all

amounts due and owing under the related transaction documents have been paid in full.

9. Accordingly, the issuance of securitized restructuring bonds is expected to result in lower aggregate distribution and transmission charges and transition charges, compared to other available alternatives.

§ 2. Definitions. As used or referred to in this act, unless a differing meaning clearly appears from the context:

1. "Ancillary agreement" means any bond insurance policy, letter of credit, reserve account, surety bond, swap arrangement, hedging arrangement, liquidity or credit support arrangement or other similar agreement or arrangement entered into in connection with the issuance of restructuring bonds that is designed to promote the credit quality and marketability of such restructuring bonds or to mitigate the risk of an increase in interest rates.

2. "Approved restructuring costs" means, to the extent approved as such under a restructuring cost financing order,

(a) costs of purchasing, redeeming or defeasing a portion of outstanding debt of the authority, including bonds and notes issued by the authority, debt issued by the New York state energy research and development authority for the benefit of the LILCO;

(b) costs of terminating interest rate swap contracts and other financial contracts entered into by or for the benefit of the authority and related to debt obligations of the authority;

(c) rebate, yield reduction payments and any other amounts payable to the United States Treasury or to the Internal Revenue Service to preserve or protect the federal tax-exempt status of outstanding debt obligations of the authority; and (d) upfront financing costs associated with restructuring bonds.

3. "Assignee" means any individual, corporation, limited liability company, partnership or limited partnership, trust or other legally-recognized entity to which an interest in restructuring property is assigned, sold or transferred, other than as security, including any assignee of that party.

4. "Authority" means Long Island Power Authority, a corporate municipal instrumentality and political subdivision of the state.

5. "Consumer" means any individual, governmental body, trust, business entity, nonprofit organization or other legally-recognized entity that takes electric delivery service within the service area by means of electric transmission or distribution facilities, whether those electric transmission or distribution facilities are owned by LIPA or any other entity.

6. "Financing cost" means the costs to issue, service, or repay restructuring bonds, whether incurred upon issuance of such restructuring bonds or over the life of the restructuring bonds, and approved for recovery in a restructuring cost financing order. Without limitation, "financing cost" may include, as applicable, any of the following:

(a) principal, interest and redemption premiums payable on restructuring bonds;

(b) any payment required under an ancillary agreement and any amount required to fund or replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds;

(c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and

(d) any cost related to issuing restructuring bonds, administering the restructuring bond issuer and servicing restructuring property and

restructuring bonds, or related to the efforts to prepare or obtain approval of a restructuring cost financing order, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, trustee fees and expenses, legal fees and expenses, accounting fees and expenses, administrative fees and expenses, placement fees, underwriting fees, fees and expenses of the authority's advisors and outside counsel, if any, rating agency fees and any other related cost that is approved for recovery in the restructuring cost financing order.

7. "Financing entity" means the restructuring bond issuer, the authority or any servicer, trustee, collateral agent, and other person or entity acting for the benefit of owners of the restructuring bonds, the restructuring bond issuer or the authority that may own restructuring property or have rights to receive proceeds of restructuring bonds or to receive proceeds from the sale of restructuring property.

8. "LIPA" means Long Island Lighting Company, currently doing business under the name of LIPA.

9. "Ongoing financing costs" means financing costs that are not upfront financing costs. Ongoing financing costs include: (a) principal, interest and redemption premiums payable on restructuring bonds; (b) any payment required under an ancillary agreement and any amount required to replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to restructuring bonds; (c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and (d) any cost related to administering the restructuring bond issuer and servicing restructuring property or restructuring bonds, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, administrative fees and expenses, trustee fees and expenses, and legal fees and expenses, accounting fees and expenses, and rating agency fees, approved for recovery in the restructuring cost financing order. Ongoing financing costs shall include any excess of actual upfront financing costs over the estimate of upfront financing costs included in the principal amount of the restructuring bonds.

10. "Restructuring bond issuer" means the corporate municipal instrumentality of the state created under section four of this act.

11. "Restructuring bonds" means bonds or other evidences of indebtedness that are issued pursuant to an indenture or other agreement of the restructuring bond issuer under a restructuring cost financing order (a) the proceeds of which are used, directly or indirectly, to recover, finance, or refinance approved restructuring costs, (b) that are directly or indirectly secured by, or payable from, restructuring property, and (c) that have a term no longer than thirty years.

12. "Restructuring cost financing order" means an order by the authority, adopted in accordance with this act, which approves the imposition and collection of transition charges, and the financing of approved restructuring costs and upfront financing costs through the sale of restructuring property and the issuance of restructuring bonds, and which includes a procedure to require periodic adjustments to transition charges to ensure the collection of transition charges sufficient to

provide for the timely payment of scheduled debt service on the restructuring bonds and all other ongoing financing costs contemplated by the restructuring cost financing order.

13. "Restructuring property" means the property rights and interests created pursuant to this act, including, without limitation, the right, title, and interest: (a) in and to the transition charges established

pursuant to a restructuring cost financing order, as adjusted from time to time in accordance with the restructuring cost financing order; (b) in and to all revenues, collections, claims, payments, money, or proceeds of or arising from the transition charges or constituting transition charges that are the subject of a restructuring cost financing order, regardless of whether such revenues, collections, claims, payments, money, or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, claims, payments, money or proceeds; and (c) in and to all rights to obtain adjustments to the transition charges pursuant to the terms of the restructuring cost financing order. Restructuring property shall constitute a vested, presently existing property right notwithstanding the fact that the value of the property right will depend on further acts that have not yet occurred, including but not limited to, consumers remaining or becoming connected to the T&D system assets and taking electric delivery service, the imposition and billing of transition charges, or, in those instances where consumers are customers of LIPA or any successor owner of the T&D system assets, such owner performing certain services.

14. "Service area" means the geographical area within which LIPA provided electric distribution services as of the implementation date of this act.

15. "Servicer" means an entity authorized and required, by contract or otherwise, to impose, bill and collect transition charges, to prepare periodic reports regarding billings and collections of transition charges, to remit collections to the appropriate financing entity, and to provide other services contemplated by the restructuring cost financing order, which may include calculation of periodic adjustments to the transition charges or providing other services related to the restructuring property. Without limitation, LIPA or any successor owner of the T&D system assets, their agents or subcontractors, or any entity authorized to bill and collect T&D rates may be a servicer.

16. "Servicing fee" means, except to the extent otherwise specified in a restructuring cost financing order, the periodic amount paid pursuant to a servicing agreement, indenture or other such document to a servicer of restructuring property which amount shall approximate the estimated incremental cost of imposing, billing and collecting transition charges, preparing servicing reports and performing other customary servicing services required in connection with securitized bonds. A restructuring cost financing order may authorize a smaller fee payable to a successor servicer that is affiliated with a successor owner of the T&D system assets if the incremental cost of providing servicing services is less than LIPA's incremental costs. A restructuring cost financing order may authorize a larger fee payable to a successor servicer that is not affiliated with the owner of the T&D system assets or is not performing similar services with respect to the base rates of the owner of the T&D system assets if such larger fee is reasonably necessary to employ a reliable successor servicer.

17. "Successor regulator" means a regulatory department, commission or other instrumentality or subdivision of the state with jurisdiction to

regulate the T&D rates of LIPA or its successor as owner of the T&D system assets.

18. "Third-party biller" means any person or entity authorized, required or entitled to bill or collect transition charges or T&D rates other than the authority, LIPA or a successor owner of the T&D system assets, or a servicer.

19. "T&D rates" means rates and charges for electric transmission and distribution services in the service area. "T&D rates" shall not include charges for the generation or resale of electricity or any charges imposed to fund public purpose programs.

20. "T&D system assets" means the physically integrated system of electric transmission and distribution facilities (and other general property and equipment used in connection therewith) owned by LIPA as of the effective date of this act or thereafter acquired for use by LIPA or its successors in providing retail electric utility service to consumers in the service area.

21. "Transition charges" means those rates and charges relating to the T&D system assets that are separate and apart from base rates of LIPA or any successor owner of the T&D system assets and that are authorized in a restructuring cost financing order to recover from consumers the principal, interest and premium payable on restructuring bonds and the other ongoing financing costs associated with the restructuring bonds. As provided in paragraph (c) of subdivision 5 of section five of this act, transition charges shall be imposed on all consumers in the service area and collected by LIPA or any successor owner of the T&D system assets, their agents, subcontractors, assignees, collection agents or any other entity designated under the restructuring cost financing order.

22. "Upfront financing costs" means the fees and expenses to issue restructuring bonds, including, without limitation, expenses associated with the efforts to prepare or obtain approval of a restructuring cost financing order, as well as the fees and expenses associated with the structuring, marketing, and issuance of restructuring bonds, including, without limitation, counsel fees, structural advisory fees, underwriting fees and original issue discount, rating agency and trustee fees (including fees of trustee's counsel), accounting and auditing fees, printing and marketing expenses, stock exchange listing fees and compliance fees, filing fees, any applicable taxes, payments in lieu of taxes, the amount required to fund a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds, and fees and expenses of the authority's advisors and outside counsel, if any. Upfront financing costs include reimbursement to any person of amounts advanced for payment of such costs. Upfront financing costs do not include scheduled debt service or other ongoing financing costs, to the extent such ongoing financing costs are payable from transition charge revenues. If any upfront financing costs cannot be reasonably determined before the principal amount of restructuring bonds is fixed, such financing costs shall be estimated and the aggregate of such estimates shall be included as an upfront financing cost for purposes of determining the principal amount of restructuring bonds to be issued. If the actual upfront financing costs are greater than the estimated upfront financing costs, the difference shall be deemed to be an ongoing financing cost; if the actual upfront financing costs are less than the estimated upfront financing costs, the proceeds corresponding to such difference shall be used to pay ongoing financing costs.

§ 3. Procedure; judicial review. 1. Standard. The authority may prepare a restructuring cost financing order for the purpose of issuing restructuring bonds to refinance outstanding debt of the authority based on a finding that such bond issuance is expected to result in savings to consumers of electric transmission and distribution services in the service area on a net present value basis.

2. Public hearings. Notwithstanding any other provision of law to the

contrary, at any time after the effective date of this act, after making such finding, the authority shall schedule and hold one or more expedited public statement hearings on the proposed restructuring cost financing order. After the conclusion of such hearings and its review of any comments received, the authority shall finalize the restructuring cost financing order for submission to the board of trustees of the authority and to the public authorities control board ("PACB"). The PACB shall have the power and it shall be its duty to, upon receiving an application for approval of a restructuring cost financing order, within thirty days after receipt of such order, either approve, absent any conditions of approval, or disapprove such order based solely on the assumptions and conditions set forth in the restructuring cost financing order and whether such order complies with the standards set forth in this act. If the public authorities control board fails to approve or disapprove such restructuring cost financing order within such thirty day period, the PACB shall be deemed to have approved the restructuring cost financing order. If the board of trustees of the authority approves such restructuring cost financing order and the PACB approves or is deemed to have approved such restructuring cost financing order, the restructuring cost financing order shall become a final rate order by the authority.

3. Appeals. Because delay in the final determination of the petition will delay the issuance of restructuring bonds, thereby diminishing savings to consumers that might be achieved if the restructuring bonds were issued promptly after the issuance of the restructuring cost financing order, notwithstanding any other law to the contrary, any action, suit or proceeding to which the authority or the restructuring bond issuer may be a party, in which any question arises as to the validity of this act or any restructuring cost financing order, shall be preferred over all other civil causes in all courts of the state, except election matters, and shall be heard and determined in preference to all other civil business pending therein, except election matters, irrespective of position on the calendar. Such preference shall also be granted upon application of counsel to the authority in any action or proceeding questioning the validity of this act or any restructuring cost financing order in which such counsel may be allowed to intervene. Notwithstanding any other provision of law to the contrary, the validity of this act may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days of the effective date of this act, and the validity of any restructuring cost financing order may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days after such restructuring cost financing order becomes a final rate order by the authority; provided, however, that any such action, suit or proceeding and all supporting papers shall be filed directly to the Supreme Court, Appellate Division, Second Judicial Department.

4. Expiration of appeals. The authority shall provide written notification to the restructuring bond issuer upon the authority's determination that any and all actions, suits and proceedings challenging this

act and the final restructuring cost financing order have been denied or dismissed or the timing associated with the filing of such actions, suits and proceedings has lapsed or expired, and any related appeals have been exhausted or the timing related to such appeals has lapsed or expired.

5. Agreement to sell restructuring bonds. Within the time specified in

the restructuring cost financing order, after receiving notice from the authority that the time for petitions and appeals has lapsed or expired, the restructuring bond issuer shall enter into an agreement with one or more underwriters or purchasers satisfactory to the authority to sell the restructuring bonds in compliance with the restructuring cost financing order. No later than the third business day after the pricing of the restructuring bonds in accordance with such agreement, the initial servicer shall determine the initial transition charges and the expected savings to consumers in accordance with the restructuring cost financing order and shall file an issuance advice letter with the authority and the restructuring bond issuer setting forth the principal amount of restructuring bonds to be issued, the pricing, the net proceeds, the initial transition charges, the expected savings to consumers and any other information required by the restructuring cost financing order. No later than the end of the third business day after the filing of such issuance advice letter, the authority shall confirm in a notice to the restructuring bond issuer that such pricing complies with the restructuring cost financing order.

6. Issuance of restructuring bonds. Within ninety days after receiving notice of confirmation from the authority, the restructuring bond issuer shall issue the restructuring bonds, in one or more series or tranches and at one or more times, pursuant to the agreement to sell the restructuring bonds. The restructuring bond issuer shall purchase the restructuring property from the authority for a purchase price equal to the net proceeds from the sale of the restructuring bonds less any amounts of such proceeds required to fund or pay upfront financing costs.

7. Irrevocability. Upon the issuance of the restructuring bonds, the transition charges, including any adjustments thereof as provided in the restructuring cost financing order, shall be deemed established by the authority as irrevocable, final and effective without further action by the authority, or any other entity. The state, including the authority or any successor regulator, thereafter may not in any way take or permit any action to reduce, impair, postpone or terminate the transition charges approved in the restructuring cost financing order, as the same may be adjusted from time to time pursuant to subdivision 3 of section five of this act, or impair the restructuring property or the collection or recovery of transition charge revenues, including, but not limited to, either directly or indirectly by taking transition charges into account when setting other rates for any owner of the T&D system assets; nor shall the amount of revenues arising with respect to restructuring property be subject in any way to reduction, impairment, postponement, or termination.

8. Application of proceeds. The restructuring bond issuer shall cause the proceeds from its issuance of the restructuring bonds to be placed in one or more separate accounts and used only to pay or fund upfront financing costs and to purchase the restructuring property from the authority. The authority shall cause the proceeds from its sale of restructuring property to be placed in one or more separate accounts and used only to pay approved restructuring costs, and if funds remain in those accounts after the payment of all approved restructuring costs, to

make a refund or credit to consumers on the same basis that transition charges are then being imposed, to the extent such a refund or credit is practical.

§ 4. Creation of restructuring bond issuer. 1. Creation of restructuring bond issuer. For the purpose of effectuating the purposes

declared in section one of this act, there is hereby created a special purpose corporate municipal instrumentality of the state to be known as "utility debt securitization authority", which shall be a body corporate and politic, a political subdivision of the state, and a public benefit corporation, exercising essential governmental and public powers for the good of the public. The restructuring bond issuer shall not be created or organized, and its operations shall not be conducted, for the purpose of making a profit. No part of the revenues or assets of the restructuring bond issuer shall inure to the benefit of or be distributable to its trustees or officers or any other private persons, except as herein provided for actual services rendered.

2. Activities limited to issuing restructuring bonds and related activities.

(a) The restructuring bond issuer is hereby authorized to:

(i) issue the restructuring bonds contemplated by a restructuring cost financing order, and use the proceeds thereof to purchase or acquire, and to own, hold and use restructuring property or to pay or fund upfront financing costs provided, however, that the restructuring bond issuer shall only issue and sell restructuring bonds once;

(ii) contract for servicing of restructuring property and restructuring bonds and for administrative services; and

(iii) pledge the restructuring property to secure the restructuring bonds and the payment of ongoing financing costs, all pursuant to section seven of this act.

(b) So long as any restructuring bonds remain outstanding, the restructuring bond issuer shall not be authorized to merge or consolidate, directly or indirectly, with any person or entity. Additionally, the restructuring bond issuer shall not have the power or authority to incur, guarantee or otherwise become obligated to pay any debt or other obligations other than the restructuring bonds and financing costs unless otherwise permitted by the restructuring cost financing order. The restructuring bond issuer shall keep its assets and liabilities separate and distinct from those of any other entity.

(c) The restructuring bond issuer shall have no additional authority to engage in other business activities; provided, however, that in connection with the powers specified in paragraph (a) of subdivision 2 of this section, as a financing entity, the restructuring bond issuer shall have the power to:

(i) sue and be sued;

(ii) have a seal and alter the same at pleasure;

(iii) make and alter by-laws for its organization and internal management and make rules and regulations governing the use of its property;

(iv) make and execute contracts and all other instruments necessary or convenient for the exercise of its powers and functions under this act and to commence any action to protect or enforce any right conferred upon it by any law, contract or other agreement, including, without limitation, make and execute contracts with the authority, LIPA or any successor owner of the T&D system assets, any servicers, any financing entity or any other public or private entities to service restructuring property owned by restructuring bond issuer, to service restructuring bonds issued by restructuring bond issuer, and to provide services in

administering the restructuring bond issuer, and to pay compensation for such services;

(v) appoint officers, agents and employees, prescribe their duties and qualifications, fix their compensation and engage the services of

private consultants, accountants, counsel and others on a contract basis for rendering professional and technical assistance and advice;

(vi) pay its operating expenses, scheduled debt service on the restructuring bonds and other ongoing financing costs;

(vii) issue restructuring bonds and provide for the rights of the holders thereof;

(viii) procure insurance against any loss in connection with its activities, properties and assets in such amount and from such insurers as it deems desirable;

(ix) invest any funds or other moneys under its custody and control in investment securities or under any ancillary agreement;

(x) establish and maintain such reserves, special funds and accounts, to be held in trust or otherwise, as may be required by agreements made in connection with the restructuring bonds, or any agreement between itself and third parties;

(xi) as security for the payment of the principal of and interest on any restructuring bonds issued by it pursuant to this act, and any agreement made in connection therewith, pledge all or any part of its revenues or assets, including, without limitation, restructuring property, unspent proceeds of its restructuring bonds, transition charge revenues, and earnings from the investment and reinvestment of unspent proceeds of its restructuring bonds and transition charge revenues; and

(xii) do any and all things necessary or convenient to carry out its purposes and exercise the powers expressly given and granted in this section.

3. No authority to file for bankruptcy protection. The restructuring bond issuer shall not be authorized to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. No governmental officer or organization is empowered to authorize, whether by executive order or otherwise, restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. Until at least one year and one day after all restructuring bonds issued by restructuring bond issuer have ceased to be outstanding and all unpaid financing costs have been paid, the state hereby pledges, contracts and agrees with owners of restructuring bonds issued by restructuring bond issuer that the state will not limit or alter the denial of authority to the restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code.

4. Governance. The restructuring bond issuer shall be governed by a board consisting of three trustees appointed by the governor. The trustees shall not be trustees, directors, officers, or employees of the authority, LIPA or any successor owner of the T&D system assets.

(a) One of the trustees first appointed shall serve for a term ending four years from January first next succeeding his appointment; one of such trustees shall serve for a term ending five years from such date; and one of such trustees shall serve for a term ending six years from such date. Their successors shall serve for terms of six years each. Trustees shall continue in office until their successors have been appointed and qualified and the provisions of section 39 of the public officers law shall apply. In the event of a vacancy occurring in the

office of a trustee by death, removal, resignation or otherwise, the Governor shall appoint a successor to serve for the balance of the unexpired term.

(b) Trustees shall serve without salary or other compensation, but each trustee shall be entitled to reimbursement for actual and necessary expenses incurred in the performance of his or her official duties.

(c) A majority of the trustees shall constitute a quorum for the transaction of any business or the exercise of any power or function of restructuring bond issuer. Any one or more trustees may participate in a meeting of the board by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation by such means shall constitute presence in person at a meeting. The board may delegate to one or more of its trustees, or officers, agents and employees, such powers and duties as the board may deem proper.

(d) Such trustees may engage in private employment, or in a profession or business. Restructuring bond issuer, its trustees, officers and employees shall be subject to the provisions of sections 73 and 74 of the public officers law.

(e) Notwithstanding any inconsistent provision of law to the contrary, general, special or local, no officer of the state or of any civil division thereof shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of an appointment as trustee of restructuring bond issuer.

(f) The governor may remove any trustee for inefficiency, neglect of duty or misconduct in office after giving him or her a copy of the charges against him or her and an opportunity to be heard, in person or by counsel, in his or her defense, upon not less than ten days notice. If any trustee shall be so removed, the governor shall file in the office of the department of state a complete statement of the charges made against such trustee and his or her findings thereon, together with a complete record of the proceedings.

(g) Each trustee shall have a fiduciary duty to act in the best interests of the restructuring bond issuer, including its creditors, the owners of the restructuring bonds, and such other duties as may be specified in the organizational documents or other agreements of the restructuring bond issuer.

(h) The restructuring bond issuer and its corporate existence shall continue until one year and one day after all restructuring bonds and ongoing financing costs and other indebtedness of restructuring bond issuer have been actually paid and all its other liabilities and obligations have been paid, met or otherwise discharged. Upon termination of the existence of restructuring bond issuer, all of its rights and property shall pass to and be vested in the state.

§ 5. Restructuring cost financing orders. 1. Content of restructuring cost financing orders. The restructuring cost financing order shall include the following: (i) a description of the approved restructuring costs; (ii) the amount of approved restructuring costs that the authority proposes to pay through the sale of the restructuring property and the issuance of the restructuring bonds; (iii) designation of the authority as the entity in which initial ownership of restructuring property will vest; (iv) an estimate of the date on which restructuring bonds will be issued and the expected scheduled term to maturity of the restructuring bonds; (v) a description of the estimated debt service on the restructuring bonds and other ongoing financing costs that may be recovered through transition charges; as part of this description, the

restructuring cost financing order may include qualitative or quantitative limitations on financing costs approved to be recovered provided

that no such limitation on financing costs shall impair the ability of the restructuring bond issuer to pay and service the restructuring bonds in accordance with their terms; (vi) a proposed methodology for allocating transition charges on an equal percentage basis among customer service classifications and among volumetric (kWh) and demand (kW) charges within those customer service classifications, along with an associated bill impact analysis of the proposed methodology; (vii) a description of the proposed adjustment mechanism to reconcile actual collections with forecasted collection on at least an annual basis and a finding that the adjustment mechanism is just and reasonable; (viii) a description of the benefits to consumers in the service area that are expected to result from the sale of the restructuring property and the issuance of restructuring bonds as opposed to traditional alternative financing mechanisms; (ix) specifying the entity that will contract to act as servicer with respect to the restructuring property and the restructuring bonds on terms and conditions mutually acceptable to such servicer and the restructuring bond issuer; (x) specifying the entity or entities that will contract to provide administrative or other services to the restructuring bond issuer; (xi) specifying when the restructuring property will be created and vest and addressing such other matters as may be necessary or desirable for the marketing or servicing of the restructuring bonds or the servicing of the restructuring property; (xii) authorizing the imposition, billing and collection of transition charges to pay debt service on the restructuring bonds and other ongoing financing costs; (xiii) a description of the restructuring property that will be created and that may be used to pay and secure the payment of the restructuring bonds approved to be issued in the restructuring cost financing order; (xiv) a requirement that the amounts in the debt service reserve accounts or other accounts funded with the proceeds of restructuring bonds or transition charges be fully used, to the extent practical, to make the final payments of principal and interest on the restructuring bonds and other ongoing financing costs or to make refunds to consumers on the same basis as such consumers would have then been obligated to pay transition costs; and (xv) the finding required by subdivision 1 of section 3 of this act.

2. Periodic reports. A restructuring cost financing order shall require the restructuring bond issuer or the servicer to file at least annually with the authority and the appropriate financing entity a periodic report showing the billing and collection of transition charges, the application of transition charge revenues to debt service on the restructuring bonds and other ongoing financing costs, and the balances in any debt service reserve accounts or other accounts required by the restructuring cost financing order.

3. Adjustment mechanism.

(a) Each restructuring cost financing order shall include a mathematical formula for making periodic adjustments to the transition charges. The mathematical formula shall apply the following principles:

(i) The transition charges will be adjusted at least annually to ensure that the collections of transition charges are adequate to pay principal and interest on the associated restructuring bonds when due pursuant to the expected amortization schedule, to fund all debt service reserve accounts to the required levels and to pay when due all other expected ongoing financing costs.

(ii) The adjustments of transition charges will take into account historical and reasonably foreseeable differences between amounts billed

and amounts collected due to applicable taxes, consumer defaults and delays, billing lags, write-offs and other factors.

(iii) The adjustments of transition charges will take into account historical and reasonably foreseeable variations in billings due to variations in electricity consumption associated with the seasons, storms and other weather conditions, outages, gain or loss of consumers, efficiencies, electric vehicles, economic conditions or other factors.

(iv) The adjustments of transition charges will take into account any over-collection or under-collection of transition charges so that, to the extent practical, the outstanding balance of restructuring bonds is equal to the scheduled balance on the expected amortization schedule, the amounts in the debt service reserve accounts are equal to the required reserve level, and all ongoing financing costs are paid when due.

(v) The adjustments of transition charges will be applied ratably to the transition charges for each customer service classification.

(b) Once restructuring bonds have been issued, the adjustment mechanism specified in the restructuring cost financing order shall be applied to correct for any over-collection or under-collection of transition charges and to provide for timely payment of scheduled principal of and interest on the restructuring bonds and the payment and recovery of other ongoing financing costs in accordance with the restructuring cost financing order. Application of the adjustment mechanism shall occur at least annually or more frequently as provided in the restructuring cost financing order. A notice of such periodic adjustment of transition charges shall be filed with the authority by or on behalf of the owner of restructuring property and a copy shall be provided to the owner of the T&D system assets at least sixty days before the adjustment is to take effect, provided that the restructuring bond issuer may request an earlier effective date.

(c) Each adjustment to the transition charge, in amounts as calculated by or on behalf of the owner of restructuring property, shall automatically become effective sixty days following the date on which the notice of periodic adjustment is filed with the authority unless the authority approves an earlier effective date requested by the restructuring bond issuer.

(d) Notwithstanding any other provision of law to the contrary, the authority shall allow interested parties thirty days from the date of filing of the notice for adjustment within which to make comments. Such comments shall be limited to the mathematical accuracy of the calculations of the amount of the adjustments. If the authority determines that the calculation of the transition charge adjustment in the notice was mathematically inaccurate, the transition charge adjustment shall be changed as soon as it is reasonably practical to do so, but estimated overcollections or undercollections resulting from the mathematical error shall be taken into account in the next succeeding periodic adjustment.

(e) No adjustment pursuant to this section shall in any way affect the irrevocability of the restructuring cost financing order as specified in subdivision 4 of section five of this act. No adjustment pursuant to this section shall require any approvals or action under any other law or shall be deemed to be the establishment of a new charge, fee or rate under any law.

4. Irrevocability of restructuring cost financing orders.

(a) A restructuring cost financing order shall be an irrevocable final

rate order when the time for any actions, suits, proceedings and appeals challenging such final restructuring cost financing order has lapsed or expired as provided in subdivision 3 of section three of this act.

(b) A restructuring cost financing order may be amended on or after the date of issuance of restructuring bonds approved thereunder only: (i) at the request of the authority; (ii) in accordance with any restrictions and limitations on amendment set forth in the restructuring cost financing order; (iii) subject to the limitations set forth in subdivision 7 of section three of this act; and (iv) upon approval by the PACB within thirty days of receipt of such amendment; provided, however, that if no approval or disapproval is made within such time, the amendment shall be deemed approved.

(c) This act, and any restructuring cost financing order made pursuant to this act, shall not be interpreted to alter or limit the rights vested in the authority to establish sufficient T&D rates to pay and perform all of its obligations and contracts with the authority's bondholders and others when due.

5. Effect of restructuring cost financing order.

(a) A restructuring cost financing order shall remain in effect and unabated until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all ongoing financing and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) A restructuring cost financing order shall remain in effect and unabated notwithstanding the bankruptcy, reorganization or insolvency of the authority, the restructuring bond issuer, LIPA or any successor owner of the T&D system assets, or any affiliate of the aforementioned, or the commencement of any judicial or nonjudicial proceeding therefor.

(c) For so long as restructuring bonds issued pursuant to a restructuring cost financing order are outstanding, and the related approved restructuring costs have not been paid in full, the transition charges authorized in the restructuring cost financing order shall be non-bypassable and shall apply to all consumers connected to the T&D system assets and taking electric delivery service located within the service area, whether or not the consumers produce their own electricity or purchase electric generation services from a provider of electric generation services other than the owner of the T&D system assets and whether or not the T&D system assets continue to be owned by LIPA.

§ 6. Restructuring bonds. 1. No recourse. Restructuring bonds shall be without recourse to the credit or any assets of the authority, LIPA and the restructuring bond issuer, other than the restructuring property and other assets and revenues of restructuring bond issuer as specified in the pertinent restructuring cost financing order.

2. Exemption from taxation.

(a) It is hereby found and declared that the activities of the restructuring bond issuer are primarily for the benefit of the people of the state of New York, for the improvement of their welfare and prosperity, and is a public purpose, and the restructuring bond issuer shall be regarded as performing an essential governmental function in carrying out the provisions of this act.

(b) The restructuring bond issuer shall not be required to pay taxes or assessments upon any of the property acquired or controlled by it or upon its activities in the use thereof or upon income derived therefrom.

(c) Restructuring bonds, their transfer and the income therefrom shall, at all times, be free from taxation by the state or any munici-

pality, except for estate and gift taxes.

3. Restructuring bonds not debt of the state. Restructuring bonds issued pursuant to a restructuring cost financing order and the provisions of this act shall not constitute a debt, general obligation or a pledge of the faith and credit or taxing power of the state or of any county, municipality or any other political subdivision, agency or instrumentality of the state. Holders of restructuring bonds shall not be taxed by the legislature or the taxing authority of any county, municipality or any other political subdivision, agency or instrumentality of this state for the payment of the principal thereof or interest thereon. The issuance of restructuring bonds does not obligate the state or any county, municipality or any other political subdivision, agency or instrumentality of the state to levy any tax or make any appropriation for payment of the principal of or interest on the restructuring bonds. All restructuring bonds must contain a statement to the following effect: "Neither the full faith and credit nor the taxing power of the state of New York is pledged to the payment of the principal of, or interest on, this bond."

4. Restructuring bonds as legal investments. Any restructuring bonds issued by the restructuring bond issuer are hereby made securities in which all public officers and bodies of this state and all municipalities, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings associations, including savings and loan associations, building and loan associations, investment companies and other persons carrying on a banking business, all trusts, estates and guardianships and all other persons whatsoever, who are now or may hereafter be authorized to invest in bonds or other obligations of this state, may properly and legally invest funds, including capital in their control or belonging to them. The restructuring bonds are also hereby made securities which may be deposited with and shall be received by all public officers and bodies of the state and all municipalities for any purpose for which the deposit of bonds or other obligations of the state is now or may hereafter be authorized.

§ 7. Restructuring property. 1. (a) Restructuring property that is created pursuant to a restructuring cost financing order shall constitute an existing, present property right, notwithstanding the fact that the imposition and collection of transition charges will depend on further acts that have not yet occurred, including but not limited to: (i) LIPA or any successor owner of the T&D system assets delivering electric energy or related services, (ii) a servicer performing servicing functions relating to the collection of transition charges, or (iii) the level of future consumption of electric energy. Restructuring property shall exist whether or not transition charges have been imposed, billed, accrued or collected and notwithstanding the fact that the value or amount of the restructuring property is dependent on the future provision of service to customers by LIPA or any successor owner of the T&D system assets.

(b) All restructuring property created pursuant to a restructuring cost financing order shall continue to exist until the restructuring bonds issued pursuant to such restructuring cost financing order are paid in full and all ongoing financing costs relating to the restructuring bonds have been paid in full.

(c) The restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of

restructuring property may be pledged to secure the payment of restructuring bonds, amounts payable to financing parties, amounts payable to holders of restructuring bonds, amounts payable under any ancillary agreement and other ongoing financing costs. So long as the restructuring property remains pledged to secure the restructuring bonds, revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs. After the occurrence of an event of default with respect to the restructuring bonds, all or any portion of restructuring property may be transferred, sold, conveyed or assigned to any person or entity. Any transfer, sale, conveyance, assignment, grant of a security interest in or pledge of restructuring property by the authority, the restructuring bond issuer, or other financing entity, to the extent previously approved in a restructuring cost financing order, does not require the prior consent and approval of any other person or entity under the public service law or any other law.

(d) If the owner of the T&D system assets, servicer, third-party biller, or any other person or entity authorized to collect transition charges, defaults on any required remittance of transition charge revenues, any court in the state, upon application by an interested party and without limiting any other remedies available to the applying party, shall order the sequestration and payment of the transition charge revenues for the benefit of the owners or pledgees of restructuring property. The order shall remain in full force and effect notwithstanding any bankruptcy, reorganization, or other insolvency proceedings with respect to a servicer, authority, LIPA or any successor owner of the T&D system assets or any affiliate thereof or of any other person or entity.

(e) Restructuring property, transition charges, transition charge revenues, and the interests of an assignee, bondholder, financing party or any other person in restructuring property or in transition charge revenues, are not subject to setoff, counterclaim, surcharge or defense by a servicer, any consumer, the authority, LIPA or any successor owner of the T&D system assets or any other person or in connection with any default, bankruptcy, reorganization or other insolvency proceeding of the authority, LIPA or any successor owner of the T&D system assets, any affiliate thereof or any other entity or otherwise. To the extent that any consumer makes a partial payment of a bill containing both transition charges and any other charges, such payment shall be allocated pro rata between the transition charges and the other charges unless the consumer specifies that a greater proportion of such payment is to be allocated to the transition charges, except that the other charges shall be reduced by the amount of any claims of setoff, counterclaim, surcharge or defense for purposes of such allocation.

(f) Any successor owner of the T&D system assets and any successor servicer shall be bound by the requirements of this act and shall perform and satisfy all obligations of a servicer in the same manner and to the same extent under a restructuring cost financing order as did LIPA and the initial servicer, including, without limitation, the obligation to impose, bill and collect the transition charges and to pay such collections to the person entitled to receive the transition charge revenues.

2. Security interests. Any pledge of restructuring property or proceeds thereof, including any moneys, revenues or property or of a revenue producing contract or contracts constituting part of the

restructuring property, made by the owner of restructuring property,

shall be perfected, valid and binding from the time when the pledge is made. The proceeds, moneys, revenues or proceeds so pledged and thereafter received by the owner of restructuring property shall immediately be subject to the lien of such pledge, and such lien shall be perfected, without any physical delivery thereof or further act. The lien of any such pledge shall be perfected, valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the owner of restructuring property irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens obtained by such claimants or transferees. The description of the restructuring property in a pledge or security agreement and any financing statement is sufficient if and only if the description refers to this Act and the restructuring cost financing order creating such restructuring property. No instrument by which a pledge or lien is created pursuant to this subdivision need be recorded in order to perfect such pledge or lien. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article 9 of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that the secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed. A pledge of restructuring property is a continuously perfected security interest and has priority over any other lien, created by operation of law or otherwise, that may subsequently attach to that restructuring property or proceeds thereof unless the holder of any such lien has agreed in writing otherwise. Any pledgee of restructuring property shall have a perfected security interest in the amount of all restructuring property revenues or other proceeds that are deposited in any deposit account or other account of the servicer or other entity in which restructuring property revenues or other proceeds have been commingled with other funds. Any other security interest that may apply to restructuring revenues or other proceeds shall be terminated when such revenues or proceeds are transferred to a segregated account for an assignee or a financing party. No application of the adjustment mechanism as described in this act shall affect the validity, perfection, or priority of a pledge of, security interest in or the sale or transfer of restructuring property.

3. Sales of restructuring property.

(a) A transfer of all or any portion of restructuring property, which the parties in the governing documentation have expressly stated to be a sale or other absolute transfer, in a transaction approved in a restructuring cost financing order, shall be treated as an absolute transfer of all of the transferor's right, title, and interest (as in a true sale), and not as a pledge or other financing, of the restructuring property, other than for federal, state and local income and franchise tax purposes.

(b) Any transfer of an interest in restructuring property shall be perfected, vested, valid and binding from the time when the transfer is made. Such transfer shall be perfected, vested, valid and binding as against the transferor, all parties having claims of any kind in tort, contract or otherwise against the transferor, and all other transferees of the transferor, irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens

obtained by such claimants or transferees. The description of the restructuring property in a sale or transfer agreement and any financing statement is sufficient if and only if the description refers to this act and the restructuring cost financing order creating such restructuring property. No instrument by which a transfer is created pursuant to this section need be recorded in order to perfect such transfer. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article nine of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that such secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed.

(c) The characterization of the sale, assignment or transfer as an absolute transfer and true sale and the corresponding characterization of the property interest of the purchaser, shall not adversely be affected or impaired by, among other things, the occurrence of any of the following factors: (i) commingling of revenues or other proceeds from transition charges with other amounts; (ii) the retention by the seller of: (A) a partial or residual interest, including an equity interest, in the restructuring property, whether direct or indirect, or whether subordinate or otherwise; or (B) the right to recover costs associated with taxes, payments in lieu of taxes, franchise fees or license fees imposed on the collection of transition charges; (iii) any recourse that the purchaser may have against the seller; (iv) any indemnification rights, obligations or repurchase rights made or provided by the seller; (v) the obligation of the seller to collect transition charges on behalf of an assignee, including but not limited to, any retention by the seller to bare legal title for the purpose of collecting transition charges; (vi) the treatment of the sale, assignment or transfer for tax, financial reporting or other purposes; (vii) any subsequent order of the authority amending a restructuring cost financing order pursuant to paragraph (b) of subdivision 4 of section five of this act; or (viii) any application of the adjustment mechanism as provided in subdivision 3 of section five of this act.

(d) An assignee or financing party shall not be considered to be a public utility or person providing electric service solely by virtue of the transactions described in this act.

§ 8. Rights and duties while restructuring bonds are outstanding. 1. Responsibilities of the authority. (a) For the purpose of investigating compliance with the provisions of this act and the applicable restructuring cost financing order, the authority shall have the right, jurisdiction, power and authority to examine the books and records of LIPA or any successor owner of the T&D system assets, the restructuring bond issuer, any other financing entity, any servicer, any third-party biller and any other person or entity that owns restructuring property or has the right to impose, bill or collect transition charges until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all financing costs relating to such restructuring bonds have been paid in full.

(b) Neither the authority nor any successor regulator may, in exercising its powers and carrying out its duties regarding regulation and ratemaking, consider restructuring bonds issued pursuant to the restructuring cost financing order to be the debt of any owner of the T&D

system assets, consider transition charges paid under the restructuring cost financing order to be revenue of any owner of the T&D system assets, or consider the approved restructuring costs or ongoing financing costs specified in the restructuring cost financing order to be costs of any owner of the T&D system assets or any affiliate, nor may the authority or any successor regulator determine that any action taken by any owner of the T&D system assets that is consistent with the restructuring cost financing order is unjust or unreasonable from a regulatory or ratemaking perspective; provided that, subject to the limitations set forth in subdivision 4 of section five of this act and the state pledge in section nine of this act, nothing in this subdivision shall (i) affect the authority to apply the adjustment mechanism as provided in subdivision 3 of section five of this act; (ii) prevent or preclude the authority from investigating the compliance of any owner of the T&D system assets and of any financing entity with the terms and conditions of a restructuring cost financing order and requiring compliance therewith; or (iii) prevent or preclude the authority or any successor regulator from imposing regulatory sanctions against any owner of the T&D system assets for failure to comply with the terms and conditions of a restructuring cost financing order or the requirements of this act. When setting other rates for any owner of the T&D system assets, nothing in this act shall prevent the authority or any successor regulator from taking into account the collection by such owner of servicing fees in excess of incremental costs of providing servicing services, or the collection by such owner of administration fees in excess of incremental costs of providing administration services; provided that this would not result in a recharacterization of the tax, accounting, and other intended characteristics of the financing, including, but not limited to, either of the following: (i) treating restructuring bonds as debt for federal income tax purposes; or (ii) treating any transfer of the restructuring property to the restructuring bond issuer or to any other financing entity as a true sale for bankruptcy purposes.

2. Duties of financing entities and any owner of T&D system assets.

(a) Any failure of any financing entity to apply the proceeds of restructuring bonds, or proceeds from the sale of restructuring property, in a reasonable, prudent and appropriate manner or otherwise comply with any provision of this act shall not invalidate, impair or affect any restructuring cost financing order, restructuring property, transition charge, or restructuring bonds.

(b) Any owner of T&D system assets, any servicer, any third-party biller and any other entity that bills or collects T&D rates shall simultaneously impose, bill and collect any transition charges applicable to consumers in the service area, including all consumers connected to the T&D system assets and taking electric delivery service located within the service area, shall allocate partial payments by consumers as provided in this act, shall terminate service to non-paying consumers on the same basis as termination of service is permitted for non-payment of T&D rates, shall exercise all enforcement rights of the owner or pledgee of the restructuring property for the benefit of such owner or pledgee, and shall remit any transition charge revenue to the owner or pledgee of the restructuring property.

§ 9. State pledge. (a) The state pledges to and agrees with the holders of restructuring bonds, any assignee and all financing entities that the state will not in any way take or permit any action that limits, alters or impairs the value of restructuring property or, except as

required by the adjustment mechanism described in the restructuring cost financing order, reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) Any person who issues restructuring bonds is permitted to include the pledge specified in subdivision (a) of this section in the restructuring bonds, ancillary agreements and documentation related to the issuance and marketing of the restructuring bonds.

§ 10. Choice of law. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in any restructuring property, transition charge or restructuring cost financing order, shall be the laws of the state of New York.

§ 11. Conflicts. In the event of conflict between this act and any other law regarding the attachment, assignment or perfection, or the effect of perfection, or priority of any pledge of, security interest in or transfer of restructuring property, this act shall govern to the extent of the conflict. In the event of conflict between this act and the public service law, the Long Island power authority act or any other law, this act shall govern to the extent of the conflict. Notwithstanding any provisions of law to the contrary, no approvals, notices or authorizations other than those specified in this act shall be required with respect to any restructuring cost financing order, and the transactions and contracts authorized in or contemplated by this act or any restructuring cost financing order, including but not limited to the incurrence and payment of any financing costs, the incurrence or payment of any approved restructuring costs, the issuance of restructuring bonds, the sale or other transfer of restructuring property, and any contracts and expenses incurred to facilitate the preparation of any restructuring cost financing order.

§ 12. Effect of invalidity on actions. Effective on the date that restructuring bonds are first issued under this act, if any provision of this act is held to be invalid or is invalidated, superseded, replaced, repealed or expires for any reason, that occurrence shall not affect any action allowed under this act that is taken by the authority, LIPA, the restructuring bond issuer, any owner of T&D system assets, an assignee, a collection agent, a financing party, a holder of restructuring bonds or a party to an ancillary agreement and any such action shall remain in full force and effect.

§ 13. Effectiveness of the act. The authority may not adopt its first restructuring cost financing order after the five year period after the effective date of this act.

§ 14. Severability. If any section, subdivision, paragraph or subparagraph of this act or the application thereof to any person, circumstance or transaction is held by a court of competent jurisdiction to be unconstitutional or invalid, the unconstitutionality or invalidity shall not affect the constitutionality or validity of any other section, subdivision, paragraph or subparagraph of this act or its application or validity to any person, circumstance or transaction, including, without limitation, the irrevocability of a restructuring cost financing order

ing bonds, the imposition of transition charges, the transfer or assignment of restructuring property or the collection and recovery of revenues from transition charges. To these ends, the legislature hereby declares that the provisions of this act are intended to be severable and that the legislature would have enacted this act even if any section, subdivision, paragraph or subparagraph of this act held to be unconstitutional or invalid had not been included in this act.

§ 15. Standing. (a) The owner of restructuring property, or the trustee representing holders of restructuring bonds, shall be expressly permitted hereby to bring actions against any owner of the T&D system assets, any third-party biller, or any other entity authorized to bill or collect T&D rates, any consumers in the service area or any other person or entity for failure to impose, bill, pay or collect any transition charges constituting part of the restructuring property then held pledged as security for such restructuring bonds or for enforcement of any other provision of this act or the applicable restructuring cost financing order.

(b) Except as provided in section three of this act, any court and the authority shall have jurisdiction over any actions for failure to impose, bill, pay or collect any transition charges or for enforcement of other provision of this act or any restructuring cost financing order.

§ 16. Third-party billing. If and to the extent that third parties are allowed to bill and/or collect any transition charges, the authority, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers, which generally would include (i) operational standards and minimum credit requirements for any such third-party biller, or require a cash deposit, letter of credit or other credit mitigant in lieu thereof, to minimize the likelihood that defaults by a third-party biller would result in an increase in transition charges thereafter billed to consumers, (ii) a finding that, regardless of who is responsible for billing, consumers shall continue to be responsible for transition charges, (iii) if a third party meters and bills for the transition charges, that the owner of the T&D system assets and any servicer must have access to information on billing and usage by consumers to provide for proper reporting to the restructuring bond issuer and to perform its obligations as servicer, (iv) in the case of a default by a third-party biller, billing responsibilities must be promptly transferred to another party to minimize potential losses, and (v) the failure of consumers to pay transition charges shall allow service termination by the owner of the T&D system assets on behalf of the restructuring bond issuer of the consumers failing to pay transition charges in accordance with service termination rules and orders applicable to T&D rates. Any costs associated with such third-party billing and/or collection shall be included as part of the recoverable ongoing financing costs or other rates or charges, as appropriate. Further, the authority and any successor regulator shall not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the then current ratings on any tranche or series of the restructuring bonds by any nationally recognized statistical rating organization designated by the restructuring bond issuer.

§ 17. This act shall take effect immediately.

§ 2. Severability clause. If any clause, sentence, paragraph, subdivi-

sion, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not take

affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part thereof directly involved in the controversy in which such judgment shall have been rendered. It is hereby declared to be the intent of the legislature that this act would have been enacted even if such invalid provisions had not been included herein.

§ 3. This act shall take effect immediately; provided, however, that the applicable effective date of Parts A through B of this act shall be as specifically set forth in the last section of such Parts.

The Legislature of the STATE OF NEW YORK **ss:**

Pursuant to the authority vested in us by section 70-b of the Public Officers Law, we hereby jointly certify that this slip copy of this session law was printed under our direction and, in accordance with such section, is entitled to be read into evidence.

DEAN G. SKELOS
Temporary President of the Senate

SHELDON SILVER
Speaker of the Assembly

Overview of Long Island Power Authority

Long Island Power Authority (LIPA) is a not-for-profit public utility and the owner of transmission and distribution networks in Long Island, New York. It is established by statute and the state governor has power to appoint board members. LIPA has entered into a management contracts with the Public Service Enterprise Group (PSEG), a publicly traded utility company in New Jersey, and PSEG's subsidiary now manages the billing and day-to-day operations of the distribution network.

Summary of LIPA Reform Act

Section 1(8) of Part B of the Long Island Power Authority Reform Act, 2013 (the LIPA Reform Act) provides the legislative purpose of the act, which is "to refinance outstanding debt of LIPA, a significant portion of which relates to the cost of constructing and financing the now abandoned Shoreham nuclear power plant". The Act authorizes the creation of a restructuring bond issuer for the limited purpose of "issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt". This section also makes it clear that it is the intention of the legislature to provide a statutory pledge (found in s. 9 of the LIPA Reform Act) that until the restructuring bonds are paid in full, "the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds".

The definitions in section 2 of the LIPA Reform Act provide some clarity to the mechanisms for the securitization regime. Restructuring bonds are issued by the "restructuring bond issuer" (which is established under section 4 of the LIPA Reform Act and known as the "Utility Debt Securitization Authority", or UDSA) and secured by the "restructuring property", which is essentially the property interest in a future revenue stream. In section 2(13), "restructuring property" is defined to include the property rights and interests in the "transition charges". As defined in s. 2(21), transition charges are established and may be amended from time to time in accordance with a restructuring cost financing order, and they are a component of the delivery line on the utility bills.

Section 3 provides the procedures for issuing restructuring bonds by the restructuring bond issuer, and includes appeal procedures and public hearing provisions. Section 4 provides the authority to establish the UDSA as a public corporation, the scope of its activities and its governance structure. It should be noted that section 4(2)(a)(i) provides that "the restructuring bond issuer shall only issue and sell restructuring bonds once" (please also see summary of 2015 amendments below). The UDSA also issues the restructuring cost financing orders in accordance with section 5.

Section 6 sets out the features of the restructuring bonds. Section 6(1) limits bond purchaser's remedies to the restructuring property, i.e. the property interest in a future revenue stream. The restructuring bonds are tax-exempt (section 6(2)), and are not debt of the state (section 6(3)).

Section 7 governs the restructuring property and creates a property interest and security interest in the future revenue stream arising from "transition charges". Section 7(1)(c) provides that "[t]he restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of restructuring property may be pledged to secure the payment of restructuring bonds", and "revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs."

Section 8(2) provides that any owner of the transmission and distribution network or any other entity that collects the delivery charges on behalf of the owner shall impose the transition charges on the consumers, and shall remit such revenues to the owner or pledgee of the restructuring property.

Section 9 provides the pledge from the state not to take actions to impair the value of the restructuring property. Sections 10 to 17 include procedural provisions such as conflicts, third-party billing and standing.

Summary of 2015 Amendments to LIPA Reform Act

The LIPA Reform Act was further amended in 2015 to permit the issuance of additional restructuring bonds by UDSA or a separate "Utility Debt Securitization Authority No. 2" up to an aggregate maximum amount (including the previously-issued Restructuring Bonds) of $4.5 billion. Any additional issuance of restructuring bonds, whether issued by UDSA or by a new issuer, will be separately secured by distinct collateral pursuant to a new financing order and transaction documents.

Background Information on Duke Energy and Duke Energy Florida

Duke Energy is a publicly-traded utility company with electricity generation and transmission networks in the Carolinas, Florida, Ohio, Kentucky and Indiana. Duke Energy Florida ("**DEF**") is a subsidiary of Duke Energy and distributes power over much of central and north Florida. The Florida Public Service Commission (the "**Commission**") regulates DEF and other electric utilities in Florida (including municipal or investor-owned electric utility, and rural electric cooperative which owns, maintains, or operates an electric generation, transmission, or distribution system).

Summary of Legislative Provisions on Asset Securitization

In 2015, section 366.95 of the Florida Statutes is created to enable "financing for certain nuclear generating asset retirement or abandonment costs". This section includes asset securitization provisions to allow investor-owned electric utilities to set up a special-purpose vehicle ("**SPV**") to issue secured bonds to finance the utility's costs ("nuclear asset-recovery costs") associated with the "early retirement or abandonment of a nuclear generating asset unit". These provisions were likely introduced in response to the closing of Duke Energy's Crystal River nuclear plant in 2013. According to DEF, "[t]his process, called Asset Securitization, will save customers approximately $600 million as compared to traditional cost recovery methods."[1]

Subsection (1) sets out the definitions of some key terms used in the section. The definition of "Assignee" provides examples of different legal structures to set up the SPV, including corporation, limited liability company, trust, partnership or public authority. The definition of "utility" limits the scope of this section to "investor-owned electric utilities" by referring to the same definition in another section of the statute book. "Nuclear asset-recovery bonds" are issued by the utility or assignee, and secured by the "nuclear asset-recovery property", which is the property interest in the revenue stream arising from "nuclear asset-recovery charges".

Subsection (2) requires the utility to submit a petition to the Commission for a financing order before the nuclear asset-recovery bonds can be issued. The petition needs to demonstrate that securitization would result in cost savings or would avoid or mitigate rate impacts compared to the traditional method of cost recovery. Subsection (2) further requires the Commission to address specific areas in its financing order, including: (i) the amount of nuclear asset-recovery costs to be financed by the bonds and the period during which the charges can be imposed on customers; (ii) detailed fact findings on cost-effectiveness and rate impacts; (iii) a requirement that charges be nonbypassable and paid by all existing and future customers receiving transmission or distribution

[1] Duke Energy announcement, "Duke Energy Florida cuts rates for customers", February 8, 2016 <http://www.prnewswire.com/news-releases/duke-energy-florida-cuts-rates-for-customers-300216799.html>

services; and (iv) mechanisms for periodic adjustment in the nuclear asset-recovery charges.

Subsection (3) provides that the bonds are considered debt for the utility only for federal income tax purposes, and limits the Commission's power to impose certain requirements in the financing order.

Subsection (4) sets out specific requirements for utility bills, such as showing the nuclear asset-recovery charge as a separate line item on the utility bill.

Subsection (5) creates a property right in the nuclear asset-recovery charges, which exists even if the charges have not been billed and may be pledged to secure the nuclear asset-recovery bonds. The utility may create a wholly owned subsidiary (the SPV) for the limited purpose of "acquiring, owning, or administering nuclear asset-recovery property or issuing nuclear asset-recovery bonds under the financing order", which also protects the nuclear asset-recovery property from potential creditor claims. This subsection also provides priority rules for competing security interests in the nuclear asset-recovery property. Subsections (6) to (8) provides further guidance in connection with the transfer of nuclear asset-recovery property to an SPV.

Subsection (9) provides that the nuclear asset-recovery bonds are not debt of the state of Florida. An issue of such bonds does not obligate the state to levy any tax for its payment, although the state may provide bond guarantees or enhancements. Subsection (10) provides statutory authority for certain entities to invest in nuclear asset-recovery bonds. Subsection (11) provides a pledge from the state not to take actions to impair the value of the nuclear asset-recovery property. Subsections (12) to (15) include boilerplate provisions such as conflicts, severability and penalties for incompliance.

Duke Energy Florida's Financing Order and Bond Issuance

In November 2015, the Commission released Financing Order PSC-15-0537-FOF-EI to approve DEF's petition for the issuance of nuclear asset-recovery bonds in the amount of $1,283,012,000 plus financing costs. Under the financing order, DEF is authorized to impose a nuclear asset-recovery charge to repay the nuclear asset-recovery bonds and associated financing costs, which will be collected on a per-kWh basis from all applicable customer rate classes. The financing order authorizes DEF to impose the charge for a period not exceeding 276 months (23 years) from the issuance of the nuclear asset-recovery bond.

DEF created Duke Energy Florida Project Finance LLC for the issuance of of nuclear asset-recovery bonds in June 2016.

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols and Definitions, which is available here, for further information.

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CREDIT OPINION
18 February 2016

Pre-Sale

Closing Date
April 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016A

Presale Report - Long Island Power Authority-Sponsored Securitization of Utility Cost Recovery Charge Assets

Capital Structure

Exhibit 1
Provisional (P) Ratings*

Series	Expected Amount	Tax Status	Interest Rate	Legal Maturity**	Provisional Ratings
2016A	[$381,730,000]	Tax-Exempt	Fixed	[12/15/2028]	(P) Aaa (sf)

The ratings address the expected loss posed to investors by the legal final maturity date. In Moody's opinion, the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the securitization. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors.
* Principal amounts and legal maturity dates are preliminary and subject to change
** Reflects the latest legal maturity date among the tranches in the series
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016, and Moody's Investors Service

Summary Rating Rationale

The Utility Debt Securitization Authority (the issuer) intends to issue Restructuring Bonds, Series 2016A. The bond issuance will enable the Long Island Power Authority (LIPA, Baa1 stable) to retire a portion of its outstanding debt. This will be the third utility cost recovery charge (UCRC) securitization that LIPA has sponsored since 2013. These bonds are backed by restructuring property which consists of, among other things, the right to impose usage-based restructuring charges on all current and future retail electric customers in LIPA's service area.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of LIPA's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 18 February 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

and diversity of the ratepayer base in LIPA's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the 2016A restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of Legislation and Financing Order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015 permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other UCRC securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to UCRC bondholders that it will not 1) take or permit any action that limits, alters or impairs the value of the restructuring property, or 2) except as required by the adjustment mechanism, reduce, alter or impair restructuring charges until the bonds have been repaid in full (the state pledge). In addition, the LIPA Reform Act and financing order contain the typical strong true-sale and security interest provisions.

LIPA's irrevocable financing order authorizes the creation of restructuring property, which grants the issuer the irrevocable right to impose, bill and collect irrevocable, non-bypassable restructuring charges based on electricity usage from all of LIPA's existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

The financing order authorizes LIPA to recover the costs of retiring certain of its outstanding debt and the issuer to recover the costs of issuing, supporting and servicing the bonds. The issuer will recover these costs by collecting restructuring charges until the bonds are repaid in full, without any specified time limit.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually, and if necessary, semiannually (and quarterly after the last scheduled maturity date of the bonds of any series), in each case to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time without limitation as to frequency, if the servicer deems necessary to ensure timely bond payments. New to the 2016A transaction, the servicer may elect to perform an additional voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). Also, the timing of the mid-year and annual true-ups has changed to help smooth charges over the course of the year.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in LIPA's service area is a credit strength. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (89%) and commercial customers (10%). Unlike most other UCRC securitizations, the service area includes very few industrial customers, which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Credit Challenges

Challenges to LIPA Reform Act and Financing Order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the securitizable restructuring property; however we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the LIPA Reform Act. Therefore, the only way to repeal or amend the LIPA Reform Act, or for LIPA to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws

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prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

Potential for Insufficient Collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration and self-generation. PSEG-LI's estimates of market demand, energy prices and growth within LIPA's service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur annually, semiannually and on an interim basis as needed.

Relatively High Restructuring Charge: LIPA expects the securitization's initial restructuring charge to represent around [0.79%] of the total monthly bill that an average 1,000 kilowatt hour (kWh) residential customer in LIPA's service area will receive as of June 1, 2016. The initial restructuring charge for the 2016A transaction, combined with the current restructuring charge for the 2013 and 2015 transactions, is expected to represent approximately [6.91%] of a typical residential customer's bill, and is relatively high compared to other utility cost recovery transactions. This concern is mitigated by LIPA's securitization offset rider, which reduces LIPA's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Exhibit 2

Asset Characteristics

Assets:	Restructuring property consisting of the issuer's irrevocable right to impose, charge and collect irrevocable, non-bypassable usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up adjustment mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full
Service Area:	Approximately 1.1 million customers in Nassau and Suffolk counties[1] and the Rockaway Peninsula

1. Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	[$381,730,000]1
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Collection Accounts and Debt Service Reserve Account
Sponsor/Seller/Initial Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority, a special purpose corporate municipal instrumentality of the State of New York
Operations Agent:	PSEG-Long Island
Trustee:	Bank of New York Mellon (Aa1/Aa2 stable, a1) 2

1. Preliminary and subject to change based on market conditions
2. The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Offering Statement dated February 18, 2016

Assets Overview

The collateral for this pool is the restructuring property consisting of the irrevocable right to impose, charge and collect non-bypassable, usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow LIPA to finance the retirement of a portion of its outstanding debt through the issuer's issuance of restructuring bonds, resulting in savings to LIPA's customers on a net present value basis. The securitization law gives LIPA the right to impose restructuring charges, which are the key asset of this securitization.

Prior to the legislature's amendment of the securitization law on March 26, 2015, the law permitted only one issuance of restructuring bonds by the issuer, and that issuance took place in December 2013 pursuant to Financing Order No. 1. The amended securitization law permits LIPA's Board of Trustees to adopt additional financing orders to, among other things, authorize the creation of additional restructuring property and the issuance of additional restructuring bonds in an aggregate additional amount not to exceed $4.5 billion (inclusive of the $2,022,324,000 previously issued 2013 restructuring bonds and the $1,002,100,000 previously issued 2015 restructuring bonds). After the 2016A issuance, LIPA will have authority to issue an additional [$1,093,846,000] billion of restructuring bonds under the securitization law.

Specifically, the securitization law coupled with the financing order authorizes LIPA to sponsor multiple bond issuances to finance the recovery of the costs of retiring a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds.

Similar to other UCRC securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that will be incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

Specifically, the State of New York pledges to and agrees with the bondholders, the issuer and LIPA that the State will not in any way: 1) take or permit any action that limits, alters or impairs the value of the restructuring property; or 2) except as required by the adjustment mechanism authorized by the securitization law and set forth in the financing order, reduce, alter or impair restructuring charges that are imposed, collected and remitted for the benefit of the bondholders until all principal of and interest on the bonds and all ongoing financing costs have been repaid in full.

The state pledge provides protection to bondholders; to the extent LIPA or the State of New York have obligations under the financing order, the LIPA Reform Act provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to change the securitization law would be through a legislative action which would be subject to the state pledge.

The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims.

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

Hawkins Delafield & Wood LLP, LIPA's special counsel, will provide a legal opinion prior to securitization closing to the effect that the bondholders (or the trustee acting on their behalf) could successfully challenge under the contracts clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Hawkins Delafield & Wood LLP, LIPA's bond counsel, will provide a legal opinion prior to securitization closing to the effect that under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The Financing Order

The securitization law authorizes LIPA's securitization program, while a separate financing order implements each issuance of bonds under the program.

On June 26, 2015, LIPA Trustees adopted Financing Order No. 3 (the financing order), together with Financing Order No. 2 and Financing Order No. 4 and on July 15, 2015, the New York Public Authorities Control Board approved them. On August 14, 2015, they became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, and the 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property.

The issuer is issuing the 2016A restructuring bonds pursuant to Financing Order No. 3, which authorizes: 1) the creation of the 2016A restructuring property; 2) LIPA to sell the 2016A restructuring property to the issuer under the financing order (the 2016A restructuring property is created simultaneously with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the 2016A restructuring property from LIPA and pay upfront financing costs; and 6) LIPA to use the proceeds of the sale of the 2016A restructuring property to retire a portion of its outstanding debt

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with LIPA setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of LIPA to review and approve the issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The 2016A Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and non-bypassable restructuring charges from all of LIPA's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism to ensure the expected collection of amounts sufficient to pay the amounts specified above on time. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from LIPA's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the Public Service Commission.

Restructuring Charges are Non-Bypassable

The securitization law provides that the restructuring charges are non-bypassable. "Non-bypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (LIPA's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if LIPA no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

Self-Generation in the Service Area is Low

Self-generation, which primarily includes solar and wind, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Self-generation is currently very small in the service area at roughly 0.3% of energy sales. LIPA forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. Certain customers that self-generate will only be responsible for paying restructuring charges based upon their "net-billed" consumption.

Municipalization

Municipalization, or the transfer of the T&D system assets to a municipal owner, would not affect restructuring charge collections because the customers are required to pay the restructuring charges even if the T&D system assets are no longer owned by LIPA. Since 1998, no municipalizations have occurred.

The Service Area

LIPA provides electric transmission and distribution services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which LIPA provided electric transmission and distribution services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. Of these, approximately 89.3% were residential, 10.2% commercial (with very few industrial customers), 0.5% street lighting and 0.0% other public authorities; the average number of customers has been fairly stable over the last 10 years, with very small year-over-year changes ranging from -0.2% to 0.7%. Retail electric usage was 48.2% residential, 48.8% commercial, 0.7% street lighting and 2.2% other public authorities.

In the year ending December 31, 2015, LIPA's largest customer, the Long Island Rail Road, accounted for less than 2.0% of LIPA's total sales, and LIPA's top 10 customers accounted for approximately 7.0% of LIPA's total sales.

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs (the revenue requirement)

3. mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
5. more frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. after the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Under the financing order, the adjustments are to be based on actual charge collections and the servicer's updated assumptions for projected future charge collections, projected uncollectibles and loss in collection of billed charges, and future payments and expenses relating to the restructuring property and the bonds.

No Third-Party Billing/Collection of Charges

Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor regulator will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

Assets Analysis

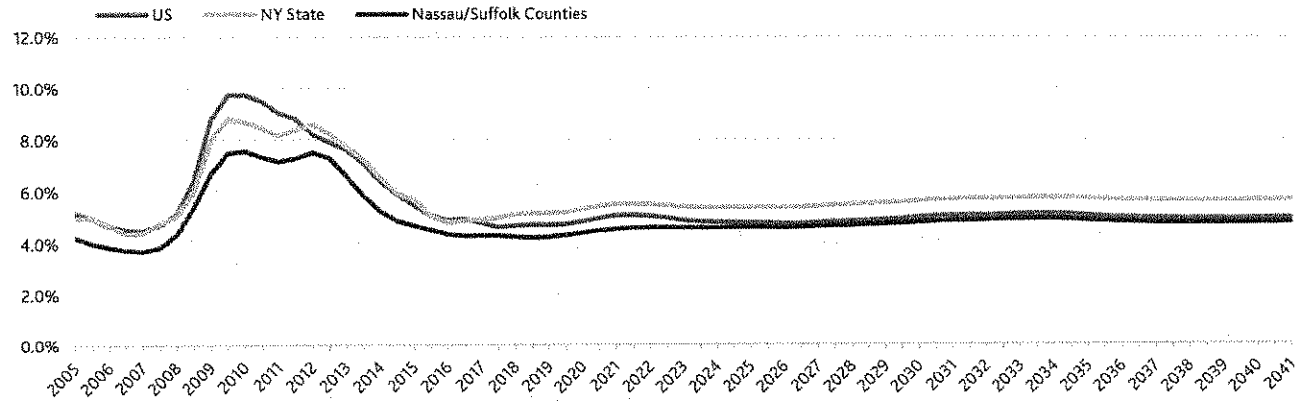
Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, 19 colleges and universities and core research institutions, such as Brookhaven National Laboratory, Cold Spring Harbor Laboratory, and the technology and science developmental centers at Stony Brook and Farmingdale Universities that specialize in the areas of biotechnology, computer sciences, wireless and internet technologies, and energy.

Long Island's median household income is substantially above that of New York and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $98,401 and $88,323, respectively, considerably higher than the $58,687 for New York and the $53,482 for the US. According to LIPA, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 4 shows that the Nassau-Suffolk unemployment rate is lower than that of the US, and we forecast the rate will remain lower.

Exhibit 4
Unemployment Rate*



* Data does not include the Rockaways, Queens, which is also part of the service area.
Source: US Bureau of Labor Statistics and Moody's Analytics

Exhibit 5 shows Moody's Analytics' forecasted average year-over-year changes in various economic stability measures for the service area, compared with New York and the US. The data include Nassau and Suffolk counties, but exclude the Rockaways in Queens, NY. The exhibit shows that forecasted population growth will be relatively flat.

Exhibit 5
Forecasted Average Year-Over-Year Changes in Population and Economic Stability Measures
(Data for 2016-2041, the scheduled maturity date of the bonds)

	Nassau-Suffolk *	New York	US
Population	0.1%	0.1%	0.7%
Households	0.3%	0.4%	0.9%
GDP (Chained 2009 $)	1.6%	1.4%	2.0%
Per Capita Income	3.3%	3.6%	3.6%
Employment (non-farm payroll)	0.5%	0.5%	0.8%

* Does not include the Rockaways, Queens, which is part of the service area
Source: Moody's Analytics

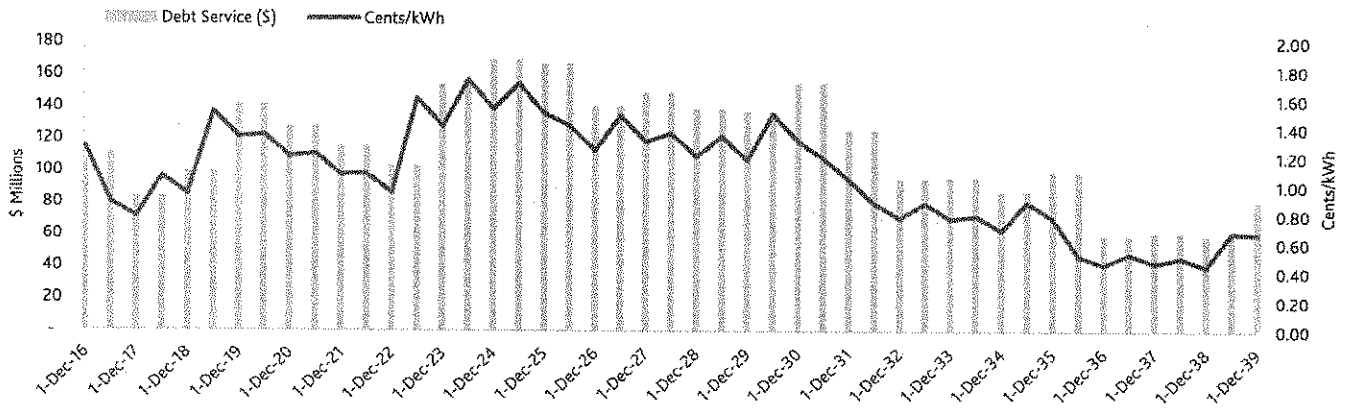
Remote Risk of Severe Ratepayer Base Declines

The securitization's performance is exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's diverse ratepayer base.

LIPA expects the combined initial restructuring charge for the 2013, 2015 and 2016A transactions to be around [6.91%] of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 1, 2016, which is higher than most other UCRC securitizations we rate. The [6.91%] is preliminary and subject to change based on market conditions.

Exhibit 6 shows LIPA's expected restructuring charge, which is the same for all customer classes, and annual debt service of the bonds over the securitization's life. The exhibit shows that the restructuring charge will vary over time to cover the unlevel debt service of the bonds, which mirrors the unlevel debt service of the retired LIPA bonds.

Exhibit 6
Restructuring Charge (Cents/kWh) and Annual Debt Service*



* Preliminary and subject to change based on market conditions.
Source: LIPA; Moody's calculations

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a typical residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand.

Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We looked at three scenarios. In our base case, we assumed 1) electricity consumption as per LIPA's projections, 2) annual net charge-offs as per LIPA's projections, 3) collection curve as per LIPA's projections and 4) actual servicing fee and other expenses (Scenario A).

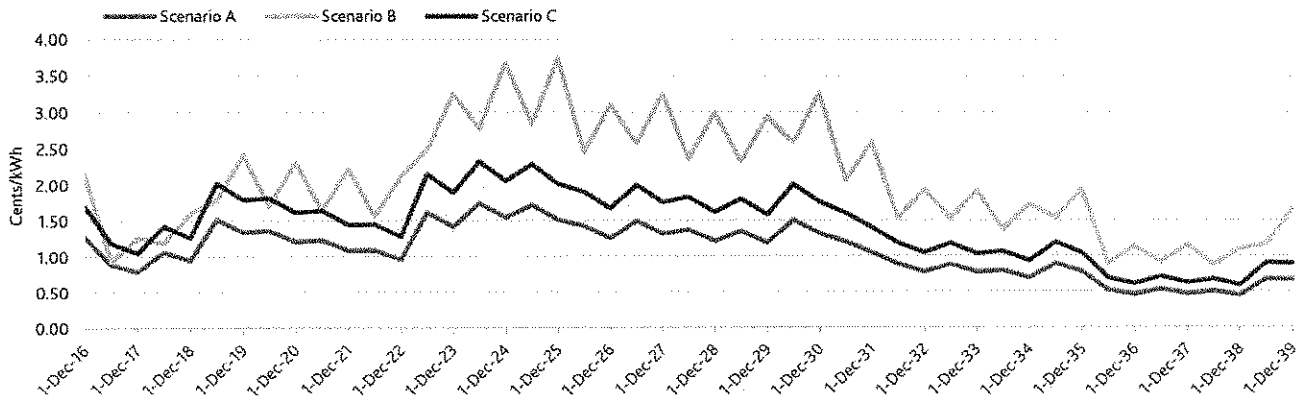
In our first stress scenario, we assumed 1) electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers, 2) annual net charge-offs are the same as in base case, 3) collection curve is the same as in base case, 4) loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year and 4) replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case (Scenario B).

In our second stress scenario, we assumed 1) electricity consumption is reduced by 25% permanently against the first year base case projection, 2) annual net charge-offs the same as in base case, 3) collection curve is the same as in base case and 4) servicing fee and all other fees the same as in base case (Scenario C).

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 7 shows the projected restructuring charges for customers in cents per kWh, and Exhibit 8 shows the projected restructuring charge as a percentage of the typical residential customer's total bill assuming monthly usage of 1,000 kWh over the securitization's life.

Exhibit 7

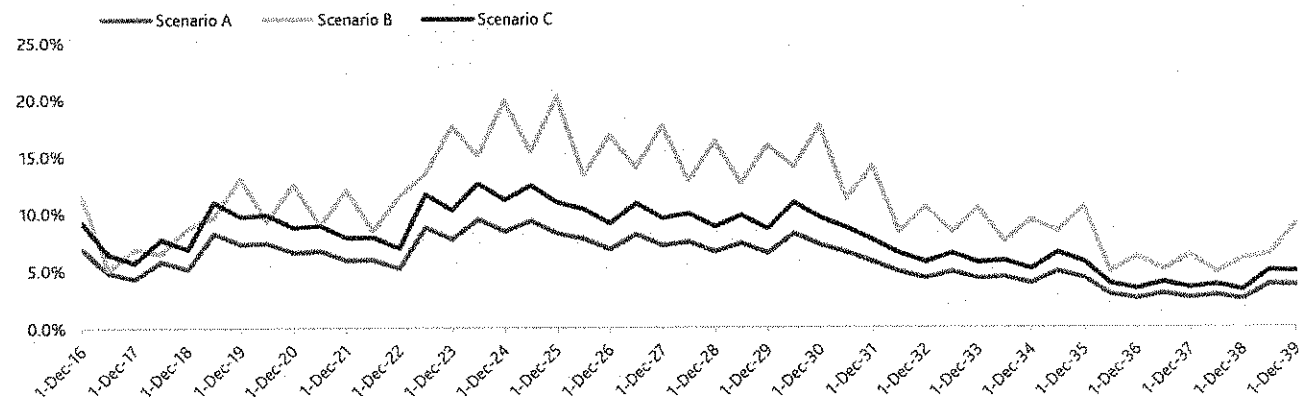
Restructuring Charge (Cents/kWh)



Source: LIPA and the servicers; Moody's calculations

Exhibit 8

Restructuring Charge as a Percentage of a Typical Residential Customer's Total Bill



Source: LIPA and the servicers; Moody's calculations

Forecasting Electricity Consumption

The company monitors the accuracy of each forecast by conducting variance analysis on a monthly basis taking into account weather impacts on kWh sales and deviations from forecast within the customer count. LIPA factors the impact of weather and the growth in self generation, energy efficiencies and the use of electric vehicles into its forecasts.

Exhibit 9 shows LIPA's annual forecast variance for ultimate electric delivery by customer class.

Exhibit 9

Annual Forecast Variance for Ultimate Electric Delivery (MWh)

	2011	2012	2013	2014	2015
Residential	4.3%	-2.4%	-2.7%	-4.3%	0.5%
Commercial	-1.0%	-3.6%	-2.4%	-1.7%	-2.1%
Street Lighting	0.2%	-2.2%	-4.4%	1.7%	-3.8%
Other Public Authorities	5.5%	-13.6%	-4.2%	3.1%	2.5%
Total	1.6%	-3.2%	-2.6%	-2.8%	-0.8%

Note: Negative variance means that the actual electric delivery is lower than the forecasted electric delivery.
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Additional Assets Analysis

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, LIPA or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

PSEG LI will perform, and is capable of performing, LIPA's key servicing duties, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among other things. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

PSEG is a publicly traded energy and energy services company. As of September 30, 2015, it had total assets of approximately $36.5 billion, latest twelve months revenues of approximately $10.9 billion; and employed approximately 12,700 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company (PSE&G), New Jersey's largest regulated electric and gas transmission and distribution utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets, pursuant to the securitization documents.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Loss Experience

Exhibit 10 shows the annual net charge-offs for LIPA, including net charge-offs of customers as part of LIPA's annual charge-off reconciliation process.

Exhibit 10

Net Charge-Offs as a Percentage of Total Billed Retail Electricity Service Revenues

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Billed Electric Revenues ($000)	3,620,532	3,413,091	3,834,255	3,753,765	3,572,133
Net Charge-Offs ($000)	24,753	19,750	20,969	24,659	23,948
Percentage of Billed Revenue	0.68%	0.58%	0.55%	0.66%	0.67%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Days Sales Outstanding

Exhibit 11 shows the average number of days that LIPA's bills remained outstanding during each of the calendar years below.

Exhibit 11

Average Days Sales Outstanding

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Average Days Sales Outstanding	38.55	39.23	39.40	37.13	36.78

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Delinquency Experience

Exhibit 12 shows the delinquency experience of LIPA during each of the calendar years below.

Exhibit 12
Average Monthly Delinquencies of Total Annual Billed Retail Electricity Delivery Service Revenues

	2011	2012	2013	2014	2015
30-59 days	$ 52,766	$ 50,348	$ 59,196	$49,980	$42,775
60-89 days	$ 28,940	$ 28,018	$ 32,104	$24,937	$21,223
90+ days	$108,208	$116,791	$135,828	$86,419	$87,580

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Securitization Structure Overview

LIPA intends to issue one series of tax-exempt, fixed rate bonds, Series 2016A, secured by the collateral on a pari passu basis. Some of the Series 2016A Bonds will be serial bonds, while others will be term bonds, with the term bonds subject to mandatory sinking fund payments. The issuer will have the option to redeem the Series 2016A Bonds with a legal final maturity date on or after [ ], in whole or in part and in any order, on and after [ ]. *All dates in this paragraph will be determined prior to closing.*

Securitization Structure Description

Bond Structure

The issuer will make payments on the bonds semiannually, on June 15 and December 15 of each year, beginning in December 2016. Interest will be paid pro rata among the tranches.

All tranches of bonds will be paid pro rata if the bonds are accelerated following an event of default under the indenture. Partial payments of any scheduled payments will be allocated pro rata between tranches of bonds with the same legal final maturity date.

Optional Redemption

The issuer will not have the option to redeem the Series 2016A Bonds with a final maturity date prior to [ ]. The issuer will have the option to redeem the Series 2016A Bonds with a final maturity date on or after [ ], in whole or in part and in any order, on and after [ ], at a redemption price of 100% of the principal amount of the Series 2016A Bonds to be redeemed, plus accrued interest to the redemption date. *All dates in this paragraph will be determined prior to closing.*

Indenture Accounts

The trustee will hold the collection account in its name and will deposit the restructuring charge collections and all other amounts it receives with respect to the collateral. The collection account will consist of five subaccounts: the general subaccount, the excess funds subaccount, the operating reserve subaccount, the debt service reserve subaccount and the upfront financing cost subaccount.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other ongoing financing costs to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;

6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;
7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates.

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

The annual true-up adjustment will be calculated to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment.

Events of Default

The Events of Default under the indenture are:

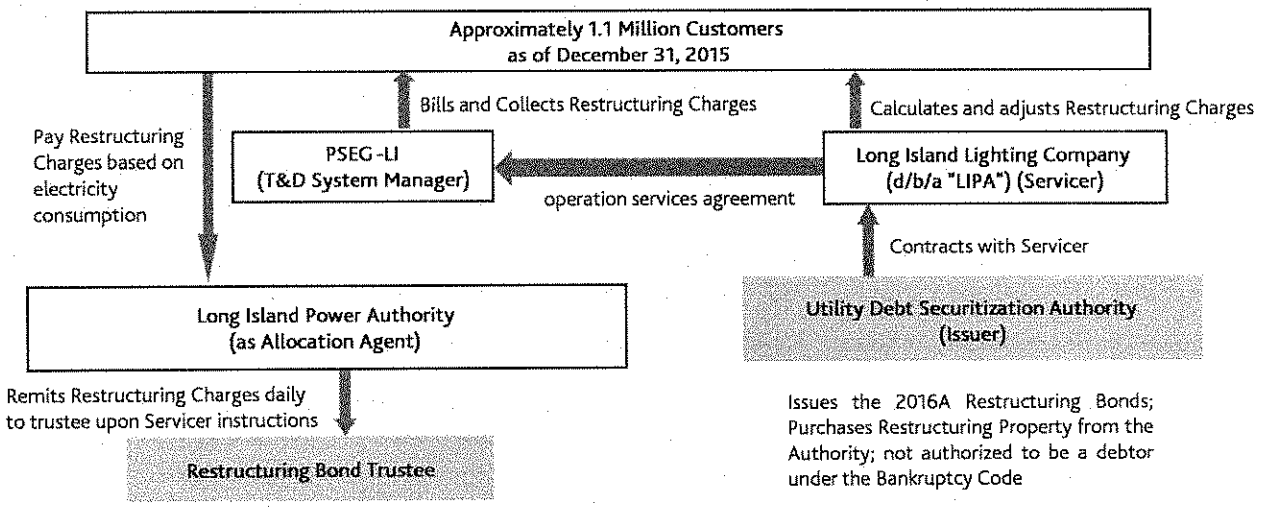
1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period); or
5. an action violating the financing order or state pledge.

Securitization Structure Analysis

Securitization Parties and Responsibilities

Exhibit 13 provides a general summary of the key securitization parties, their roles and their various relationships to the other parties.

Exhibit 13
Securitization Parties and Responsibilities

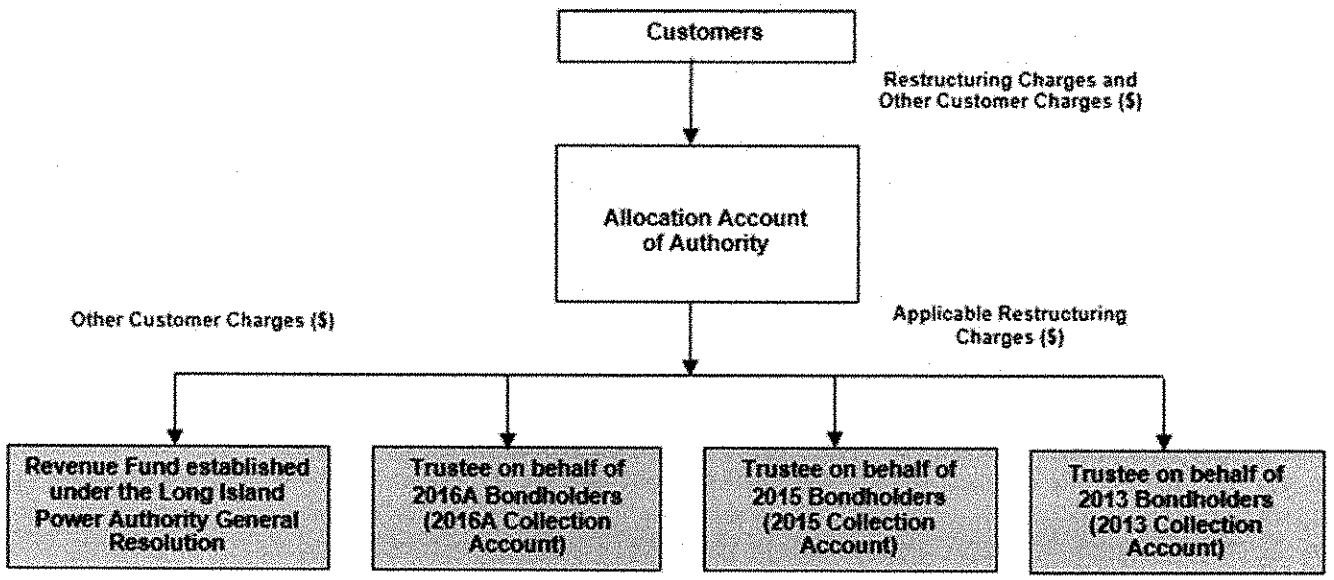


Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Flow of Funds

Exhibit 14 shows a general summary of the securitization's flow of funds: PSEG-LI will bill and collect the restructuring charges from LIPA's customers on behalf of the servicer. The servicer will be required to cause all customer payments (including restructuring charge collections) to be deposited into the allocation account, which LIPA established to hold all payments until the checks clear. Initially, the account will be held by J.P. Morgan Chase Bank. If customers make payments directly to the servicer instead of to the allocation account, the servicer must remit such payments to the allocation account within two business days' receipt by the servicer or LIPA. LIPA, as allocation agent, will control and administer the allocation account for the benefit of the trustee for the holders of the bonds and the trustee for the holders of LIPA bonds. On each business day, the allocation agent must transfer to the collection account the amount of restructuring charge collections that the servicer estimates to have been received and deposited into the allocation account on such day.

Exhibit 14
Flow of Funds



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Legal Structure

The primary steps of the securitization are as follows:

1. The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under chapter 9 or any other provision of the Bankruptcy Code. The securitization law formed the issuer solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.
2. The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from LIPA and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.
3. LIPA will use the proceeds from the sale of its restructuring property to retire certain of its outstanding debt. LIPA will act as the servicer of the restructuring property under a servicing agreement with the issuer and as the issuer's administrator under an administration agreement with the issuer. PSEG-LI will act as LIPA's service provider and will perform LIPA's key servicing duties under an operations servicing agreement with LIPA.

Sponsor and Seller

LIPA will be the securitization's sponsor and the seller of the restructuring property. LIPA is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a chapter 9 debtor pursuant to its enabling legislation.

LIPA took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of LIPA through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

LIPA is governed by a Board of Trustees (LIPA Trustees) and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. LIPA is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

Pursuant to LILCO's organizational documents, LIPA conducts and manages LILCO's business and affairs. Accordingly, LILCO is controlled by LIPA.

LIPA and LILCO are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LILCO conducts the electric business in the service area and is responsible for providing service to customers in the service area. LIPA and LILCO are also parties to an administrative services agreement pursuant to which LIPA provides personnel, personnel-related services and other services necessary for LILCO to provide electric service in the service area.

To assist LIPA (acting through LILCO) in providing electric service in the service area, LIPA and LILCO have entered into operating agreements to provide them with the operating personnel and a significant portion of the power supply resources necessary for LILCO to continue to provide such electric service. From 1998 through 2013, National Grid plc, certain of its subsidiaries (National Grid subs) or their predecessors performed most such operations.

Beginning in 1998, a National Grid sub was the manager of LILCO's electric T&D system under a management services agreement which expired at the end of 2013. Beginning January 2014, PSEG-LI assumed the role from the National Grid sub. T&D system management services include, among other functions, the day-to-day operation and maintenance of the T&D system, customer service, billing and collection, meter reading and forecasting energy consumption.

In July 2013, New York Governor Andrew Cuomo signed the LIPA Reform Act, codified as Chapter 173, Laws of New York, into law. On March 30, 2015, the New York State Assembly and Senate adopted Chapter 58 of the Laws of New York, 2015, which amended the LIPA Reform Act to authorize the issuer to issue additional restructuring bonds. On April 13, 2015, the Governor signed Chapter 58 into law. On May 13, 2015, the time for filing any challenges to the LIPA Reform Act, as amended, expired and no such challenges were filed.

The LIPA Reform Act effectively shifted the major operational and policy-making responsibilities for the T&D system, including significant responsibilities relating to capital expenditures, budgets and emergency response, from LIPA to PSEG-LI. PSEG-LI's scope of services and LIPA's reserved rights have been adjusted to reflect the shift in operations, management and policy making responsibilities while enhancing LIPA's oversight rights. The LIPA Reform Act also requires that staffing be kept at levels only necessary to ensure that LIPA is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and to oversee the activities of PSEG-LI.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

MOODY'S INVESTORS SERVICE

CREDIT OPINION
29 July 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016B

Long Island Power Authority-Sponsored Utility Cost Recovery Bonds

Capital Structure

Exhibit 1

Provisional (P) Ratings*

Series	Provisonal Rating	Expected Amount	Tax Status	Coupon	Payment Frequency	Expected Maturity	Legal Final Maturity**
Series 2016B	(P)Aaa (sf)	$475,000,000	Tax Exempt	Fixed	Semi-annual	12/15/2033	12/15/2035

The ratings address the expected loss posed to investors by the legal final maturity. In our opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Our ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.

* Principal amounts and legal maturity dates are preliminary and subject to change

** Reflects the latest legal maturity date among the tranches in the series

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Summary Rating Rationale

We have assigned provisional ratings to the single series of bonds (Series 2016B bonds, or the bonds) that Utility Debt Securitization Authority (the issuer) will issue. The Long Island Power Authority ("the Authority", Baa1 stable), which is a corporate municipal instrumentality and a political subdivision of the State of New York, is sponsoring the transaction. The Authority wholly owns the Long Island Lighting Company (doing business as "LIPA", the servicer), which provides electric transmission and distribution services in most of Nassau and Suffolk counties and a portion of Queens county. New York State legislation formed the issuer to securitize a special charge (the restructuring charge) imposed on the Authority's customers' utility bills. The Authority will use the proceeds of the securitization to retire a portion of its outstanding debt. The Series 2016B bonds will be the fourth utility cost recovery bonds sponsored by the Authority since 2013.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 28 July 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

The primary collateral backing the Series 2016B bonds is the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area (the restructuring property). New York State legislation, along with an irrevocable financing order adopted by the Authority on June 26, 2015, authorizes the creation of the restructuring property.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of the Authority's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability and diversity of the ratepayer base in the Authority's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of legislation and financing order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015, permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other utility cost recovery charge securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order (the state pledge). In addition, the securitization and financing order contain the typical true-sale and security interest provisions.

The Authority's irrevocable financing order authorizes the Authority to recover specified costs of retiring its corporate debt by collecting restructuring charges. The restructuring property grants the issuer the irrevocable right to impose, bill and collect irrevocable, nonbypassable restructuring charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. Nonbypassable refers to the requirement that the charges be levied on all of the Authority's existing and future retail electric customers receiving transmission and distribution services in its service area, including customers of any Authority successor or assignee.

True-up adjustment mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually and, if necessary, semiannually, to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments at any time if the servicer deems necessary to ensure timely bond payments. The servicer may also elect to perform a voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). This voluntary mid-year adjustment helps reduce the volatility of the restructuring charge to customers. The inclusion of an operating reserve account and a debt service account provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between true-ups.

Affluent ratepayer base: The size, economic stability and diversity of the ratepayer base in the Authority's service area are credit strengths. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (54% by revenue) and commercial customers (43% by revenue).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Experienced servicer: LIPA has considerable prior servicing experience with restructuring charges, including acting as servicer for the Authority's three outstanding utility cost recovery charge securitizations.

Although LIPA is the named servicer for this securitization, PSEG Long Island LLC (PSEG-LI, unrated), a subsidiary of Public Service Enterprise Group Incorporated (Baa2, positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others. PSEG-LI currently performs these same functions for the three outstanding utility cost recovery charge securitizations sponsored by the Authority. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

Credit Challenges

Challenges to securitization law and financing order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the restructuring property. However, we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for the Authority to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered. Several past challenges to securitization laws such as this in other jurisdictions have been unsuccessful.

Potential for insufficient collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. The Authority's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, by which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments are required to occur annually and can occur semi-annually and at the discretion of the servicer on an interim basis as needed.

Relatively high restructuring charge: The Authority expects the securitization's initial restructuring charge to represent around 2.55% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in the Authority's service area will receive as of June 15, 2017. The initial restructuring charge for the 2016B transaction, combined with the current restructuring charge for the 2013, 2015 and 2016A transactions, is expected to represent approximately 7.8% of a 1,000 kWh residential customer's bill. This percentage charge is relatively high compared to charges in other utility cost recovery bond transactions. For context, the three most recent utility cost recovery bond issuances we rated, Duke Energy Florida Project Finance, LLC, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 2.5%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively. A high cumulative recovery charge could incentivize a legal challenge to the restructuring charges or the securitization law, or could increase political pressure to rescind or change the securitization law through legislation. This concern is mitigated by the Authority's securitization offset rider, which reduces the Authority's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Restructuring property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from the Authority or its successors or assignees
Service Area:	The Authority's service area covers approximately 1.1 million residential, commercial customers in Nassau and Suffolk counties* and the Rockaway Peninsula

*Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	$475,000,000*
Structure:	Discrete trust
Credit Enhancement:	Mandatory uncapped true-up mechanism; operating reserve account (0.5%); debt service reserve account (1.5%)
Transaction Parties	
Sponsor/Depositor/Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority
Transmission and Distribution System Manager:	PSEG Long Island LLC (unrated)
Trustee:	The Bank of New York Mellon Trust Company, National Association (Aa1/Aa2 stable, a1)**

*Preliminary and subject to change based on market conditions
**The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Overview

The collateral for this pool is the restructuring property, consisting of the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area.

The bonds are also secured by funds on deposit in the collection account, including the debt service reserve subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds with respect to the pledged collateral.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow the Authority to finance the retirement of a portion of its outstanding debt through the issuance of restructuring bonds by the issuer, resulting in savings to the Authority's customers on a net present value basis. The securitization law gives the Authority the right to impose restructuring charges, which is the key asset backing this securitization.

The securitization law, coupled with the adoption of additional financing orders, authorizes the Authority to create additional restructuring property as collateral for the issuance of bonds. The Authority will use this issuance to retire a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds. The current financing order allows for an aggregate amount not to exceed $4.5 billion (inclusive of the previously-issued bonds: $2,022,324,000 in 2013, $1,002,115,100 in 2015 and $636,770,000 in 2016). After the Series 2016B issuance, the issuer has capacity issue an additional $363.8 million of restructuring bonds under the initial authorization.

Similar to other utility cost recovery charge securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that is incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

The Financing Order

On June 26, 2015, the Authority adopted Financing Order No. 4 (the financing order), together with Financing Order No. 2 and Financing Order No. 3; all of which were approved by the New York Public Authorities Control Board on July 15, 2015. On August 14, 2015, the financing orders became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the Series 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, the Series 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property and the Series 2016A restructuring bonds that the issuer issued pursuant to Financing Order No. 3 are secured by the 2016A restructuring property.

The issuer is issuing the bonds pursuant to the financing order, which authorizes: 1) the creation of the restructuring property; 2) the Authority to sell the restructuring property to the issuer under the financing order (the restructuring property is created simultaneous with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the restructuring property from the Authority and pay upfront financing costs; and 6) the Authority to use the proceeds of the sale of the restructuring property to retire a portion of its outstanding debt.

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with the Authority setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of the Authority to review and approve the

issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The State Pledge

The securitization law includes a pledge from the State of New York to the bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order.

Any action of the New York legislature adversely affecting the restructuring charges or the ability to impose, charge or collect the restructuring charges would likely require the State of New York to pay just compensation under the "takings clause" of the United States and State of New York Constitutions.

The state pledge provides protection to bondholders. To the extent the Authority or the State of New York have obligations under the financing order (e.g. to file for true-up adjustments), the securitization law provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

The Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and nonbypassable restructuring charges from all of the Authority's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism. This is designed to ensure the expected collection of amounts sufficient to timely pay the amounts specified above. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from the Authority's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the New York Public Service Commission.

The restructuring charges are nonbypassable; "nonbypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (the Authority's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if the Authority no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

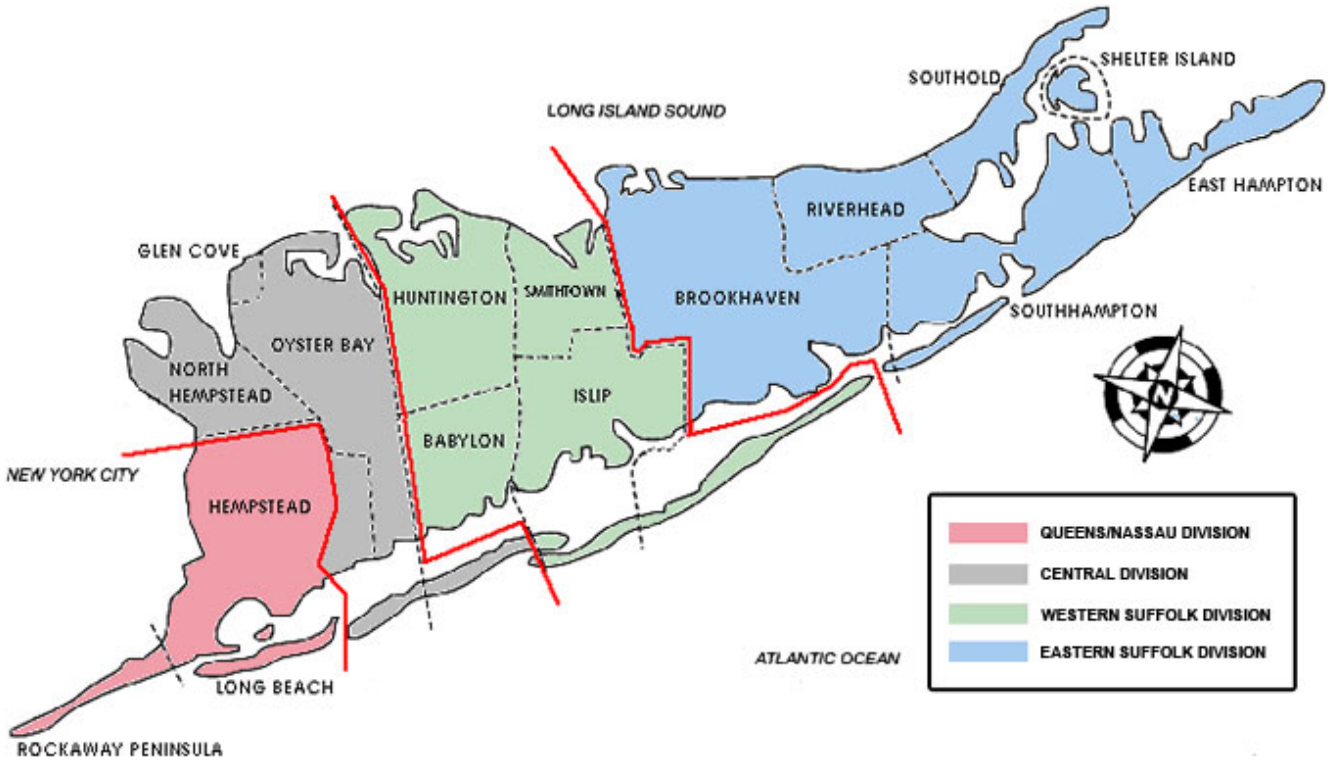
The Service Area

The Authority provides electric T&D services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which the Authority provided electric T&D services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. In 2015, retail electric usage was 54.4% residential, 43.5% commercial, 0.7% street lighting and 1.5% other public authorities. Exhibit 4 below shows the service area.

Exhibit 4
LIPA Service Area



Source: PSEG-LI website

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. Initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. Standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs
3. Mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. Voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

5. More frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. After the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, the Authority, or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

Although LIPA is the named servicer for this securitization, PSEG-LI, a subsidiary of Public Service Enterprise Group Incorporated (PSEG, Baa2 positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting the restructuring charges, meter reading and forecasting electricity usage, among others. PSEG is a publicly traded energy and energy services company. As of December 31, 2015, it had total assets of approximately $37.5 billion, last twelve months revenues of approximately $10.4 billion; and employed approximately 13,000 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company, New Jersey's largest regulated electric and gas T&D utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets.

Billing

PSEG-LI will perform LIPA's duties of billing and collecting the restructuring charges, meter reading and forecasting electricity usage. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

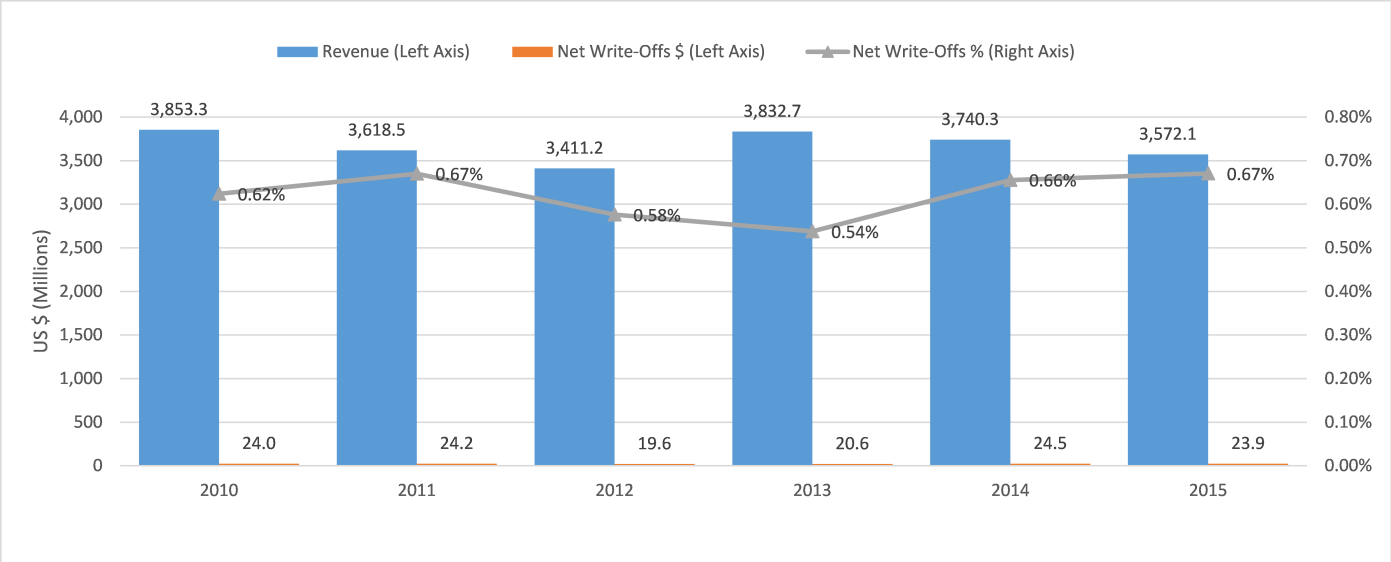
Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor servicer, and any owner of the T&D system assets will take steps to ensure nonbypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor servicer will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Exhibit 5 below shows net write-offs since 2010, which have ranged from a low of 54bps of billed revenue in 2013 to a peak of 67bps in 2011 and 2015.

Exhibit 5

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Exhibit 6 below shows LIPA customer delinquency data since 2010.

Exhibit 6

Average Monthly Delinquencies as a Percentage of Total Billed Revenues

	2010	2011	2012	2013	2014	2015
30-59 days	1.40%	1.46%	1.48%	1.54%	1.34%	1.20%
60-89 days	0.73%	0.80%	0.82%	0.84%	0.67%	0.59%
90+ days	2.43%	2.82%	3.42%	3.54%	2.31%	2.46%
Total	4.56%	5.08%	5.72%	5.93%	4.31%	4.25%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Analysis

Legal Analysis

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

New York does not have a referendum or initiative process by which the securitization law may be challenged. Therefore, the only way for the securitization law to be changed would be through a legislative action which would be subject to the state pledge.

Bondholders (or the trustee acting on their behalf) could challenge under the Contract Clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would likely be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The financing order provides that the restructuring property may be pledged to secure the payment of the bonds, financing costs, and other amounts owed. The securitization law provides that a valid and enforceable security interest in the restructuring propery will attach and be perfected at the time the pledge is made. The lien and security interest attach without any physical delivery of collateral or other act. The securitization law provides that the pledge is continuously perfected and has priority over any other lien created by the operation of law or otherwise that may be created subsequently.

Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, more than 20 colleges and universities and core research institutions.

Long Island's median household income is substantially above that of New York State and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $99,035 and $86,266, respectively, considerably higher than the $58,878 for New York State and the $54,562 for the US. According to the Authority, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 7 below shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 7
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	51.5%	52.8%	52.2%	52.4%	53.2%	53.2%	54.1%	53.8%	54.2%	54.4%	53.4%	54.4%
Commercial	46.6%	45.1%	45.7%	45.4%	44.5%	44.5%	43.8%	43.9%	43.7%	44.6%	44.0%	43.5%
Street Lighting	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	1.1%	0.7%
Other Public Authorities	1.1%	1.4%	1.3%	1.4%	1.5%	1.5%	1.3%	1.5%	1.4%	0.3%	1.5%	1.5%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

For the twelve months ending on June 30, 2016, the ten largest retail electric customers represented approximately 5.7% of the Authority's retail kilowatt-hour sales resulting in 4.8% of revenues. As of the closing date, no customer or group of related commercial is exempt from paying the restructuring charges. Exhibit 8 below shows the energy usage and revenue from the top 10 commercial customers.

Exhibit 8
Top 10 LIPA Commercial Customers

	Industry	Energy Usage (GWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	State Public Transportation	303.8	1.52%	$45,428,220	1.32%
2	Telecommunications	145.7	0.73%	$22,870,878	0.67%
3	Nas/Suf County Govt Twnsps	132.6	0.67%	$20,800,037	0.61%
4	Water Districts	122.7	0.62%	$20,598,940	0.60%
5	Health Services-Hospitals	120.0	0.60%	$17,580,632	0.51%
6	Retail Food	102.6	0.51%	$16,725,102	0.49%
7	Real Estate/Developers	66.9	0.34%	$5,284,931	0.15%
8	Nassau Universities	51.0	0.26%	$7,354,337	0.21%
9	Manufacturing	43.7	0.22%	$4,489,759	0.13%
10	Retail Non-Food	36.4	0.18%	$3,726,650	0.11%
	Total	**1,125**	**5.65%**	**164,859,486**	**4.81%**

Source: Utility Debt Securitization Authority

Remote Risk of Severe Ratepayer Base Declines

The Series 2016B bonds are exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's stable ratepayer base. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Customers that self-generate will only be responsible for paying restructuring charges based upon their net-billed consumption. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The restructuring charge will be recoverable from all customers taking T&D service. As of July 29, 2013, the securitization law defines the service area to include two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. Thus, the service area is fixed by the legislation. If the service area expands in the future, the new customers would be subject to the restructuring charge on a going-forward basis.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges. Moreover, municipalization would not affect restructuring charge collections since a successor and its customers will be subject to the restructuring charges, even if the T&D system assets are no longer owned by the Authority. Since 1998, no municipalizations have occurred in the service area.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact the Authority's operations, temporarily interrupting transmission, distribution and consumption of electricity, hence reducing the collections of restructuring charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the Authority's service area, which could cause the per-kWh restructuring charge to be greater than expected.

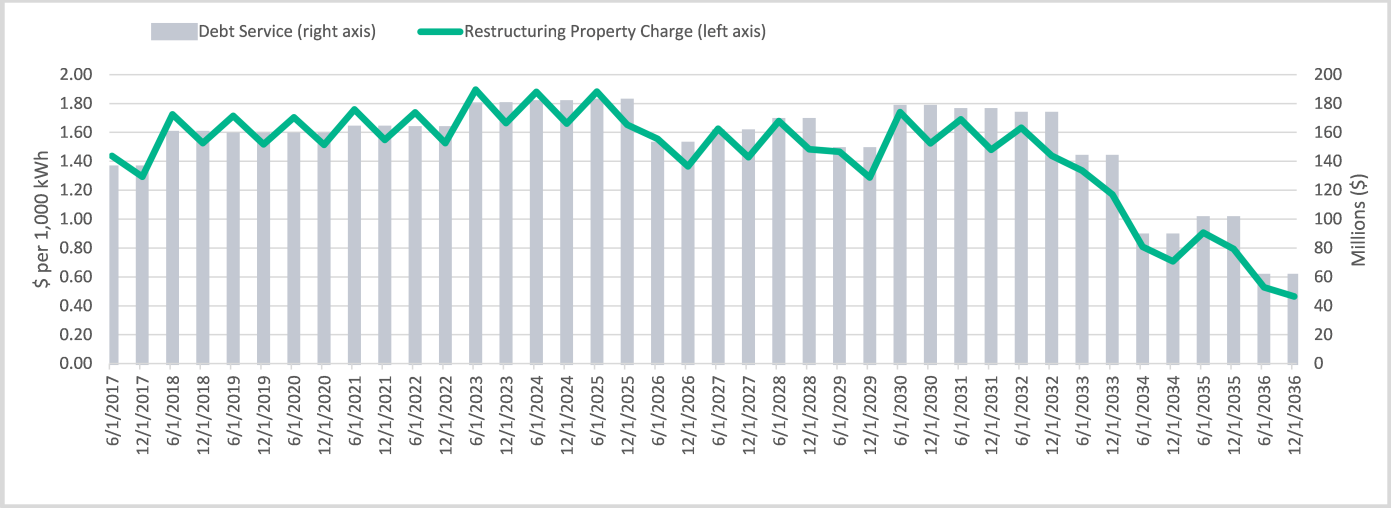
Forecasting Electricity Consumption

The Authority's internal company forecasts are used for projections of electricity price and weather conditions. The forecast incorporates customer usage, delinquencies and write-offs, among other inputs.

The Authority assesses the restructuring charges based on its forecasts of customer usage. The amount and the rate of restructuring charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs.

Exhibit 9 below shows the forecasted restructuring charge per 1,000 kWh and scheduled debt service payments.

Exhibit 9
Restructuring Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: Utility Debt Securitization Authority; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Additionally, there may be insufficient funds if the servicer inaccurately forecasts electricity consumption or uses inaccurate customer delinquency or charge-off data when setting or adjusting the 2016B restructuring charges. We view this risk as remote, as the maximum forecast variance since 2011 has been less than 6% per customer category, as shown in Exhibit 10.

Exhibit 10
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	4.31%	-2.37%	-2.69%	-4.28%	0.51%
Commercial	-1.00%	-3.59%	-2.39%	-1.70%	-2.07%
Street Lighting	0.17%	-2.19%	-4.44%	1.71%	-3.81%
Other Government	5.49%	-13.64%	-4.20%	3.13%	2.49%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm that the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the restructuring charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the restructuring charge, both in absolute terms and as a percentage of the customer's energy bill. In our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the restructuring charge is as high as 22.74%, higher than most other utility cost recovery charge securitizations. This concern is mitigated by the Authority's securitization offset rider, which reduces the delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

The Authority expects the combined initial restructuring charge for the 2013, 2015, 2016A and 2016B transactions to be around 7.8% of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 15, 2017, which is higher than most other utility cost recovery charge securitizations we rate. The 7.8% is preliminary and subject to change based on market conditions.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the Authority's projections
2. Implied net charge-offs of 0.62%
3. Collection curve projects 20.0% of collections within 30 days and 80.0% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains LIPA or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case

4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year

5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case

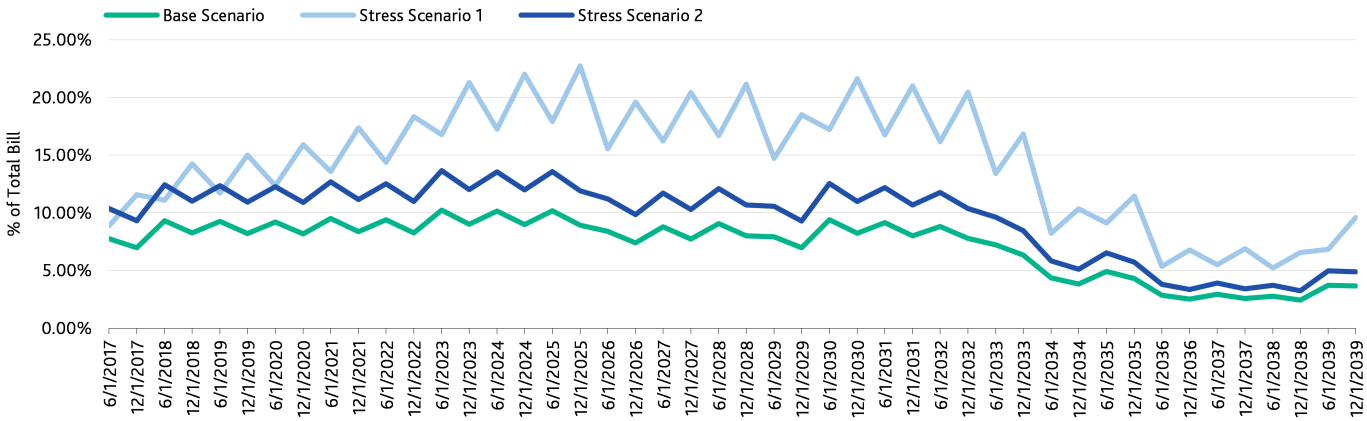
3. Collection curve is the same as in base case

4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 11 shows the projected restructuring charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 12 shows the projected restructuring charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 11

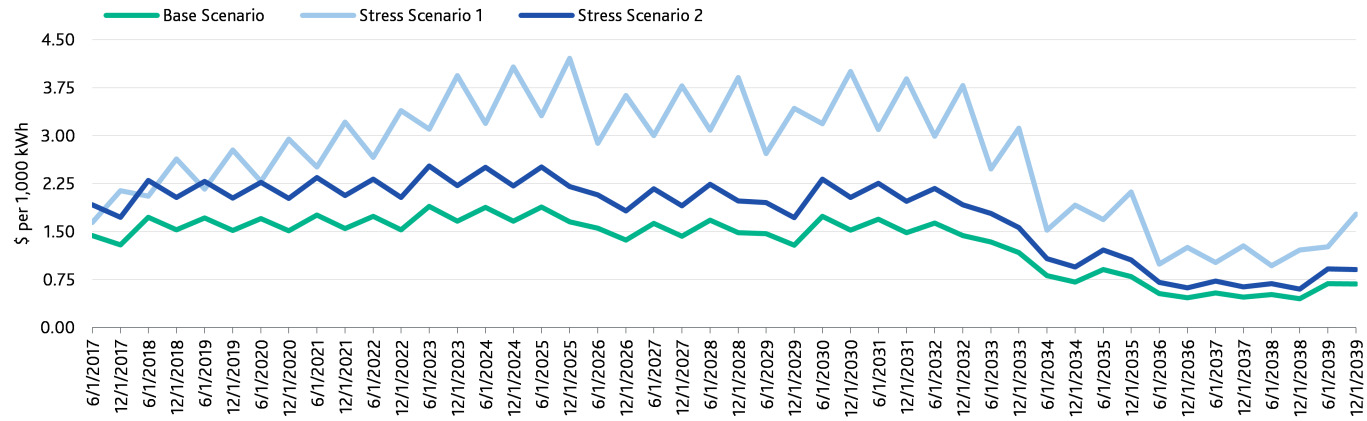
Projected Restructuring Charge as a Percentage of a Customer's Total Bill



Source: Utility Debt Securitization Authority; Moody's calculations

Exhibit 12

Projected Restructuring Charge ($ per 1,000 kWh)



Source: Utility Debt Securitization Authority; Moody's calculations

Comparables

As shown in Exhibit 13, stress scenario 1 is more stressful and results in a peak restructuring charge equal to about 22.74% of a 1,000 kWh per month customer's bill. This is high compared to other utility cost recovery deals.

Exhibit 13

Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
UDSA 2016B	10.25%	22.74%	13.66%
UDSA 2016A	7.21%	16.04%	10.40%
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

On the closing date, the Authority will sell the restructuring property to the issuer pursuant to a sale agreement between the issuer and the Authority. LIPA will be the servicer of the restructuring property. PSEG-LI will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others.

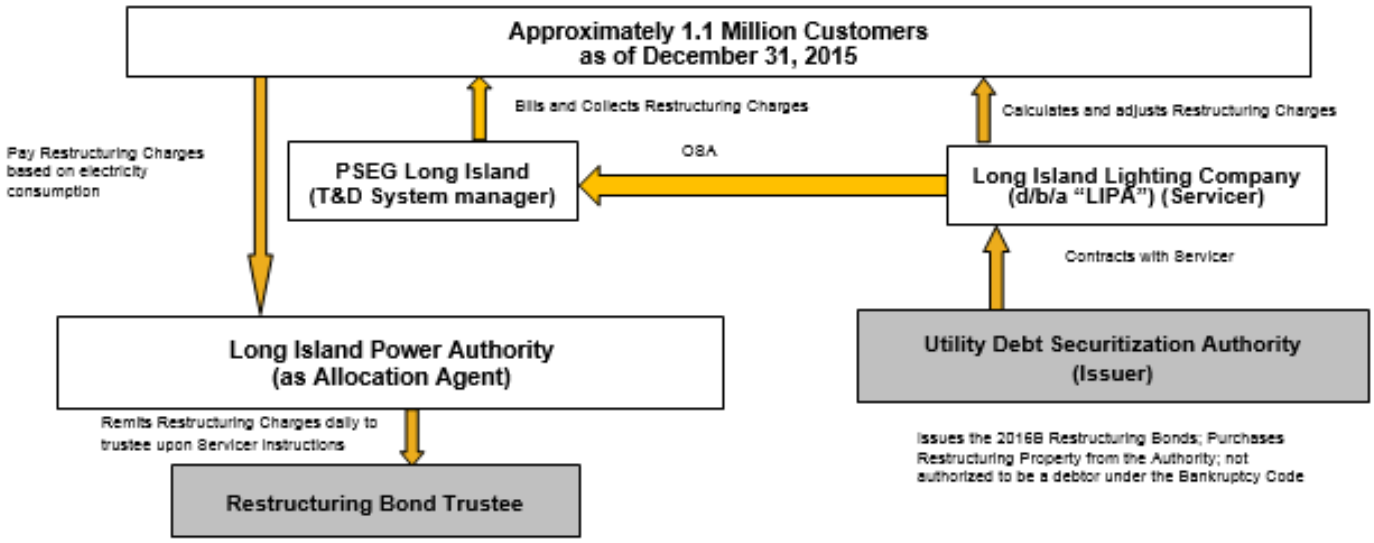
Securitization Structure Description

Structural Diagram

Exhibit 14 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 14

Structural Diagram



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

1. The issuer purchases the restructuring property from the Authority and issues the Series 2016B bonds
2. The issuer contracts with LIPA as servicer to calculate and adjust the restructuring charges
3. LIPA contracts with PSEG-LI to bill and collect the restructuring charges

4. Electric utility customers pay restructuring charge on electricity bills based on electricity consumption
5. The Authority, as allocation agent, remits the restructuring charges to the trustee on a daily basis

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the debt service reserve account. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Operating Reserve Account

On or before the date of issuance of the bonds, the Authority will deliver to the trustee for deposit into the operating reserve account an amount not less than 0.50% of the initial aggregate principal amount of the Series 2016B bonds. Amounts may be withdrawn from the account to pay scheduled principal on the Series 2016B bonds, provided however that an amount not less than 0.50% remains on deposit in the account.

Debt Service Reserve Account

On or before the date of issuance of the bonds, the issuer will make a capital contribution to the trustee in an amount not less than 1.5% of the aggregate outstanding principal amount of the bonds, which will be deposited in the debt service reserve account. Under the financing order, any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the subaccount and applied to subsequent payments.

Cash Commingling

The servicer is entitled to commingle the restructuring charges that it receives with its own funds until it remits the funds to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from restructuring charges with other funds.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the allocation account within two business days. Any discrepancy between estimated and actual collections is mitigated by the true-up mechanism, which allows the Authority to adjust the restructuring charges at any time as needed to make timely interest and principal payments on the bonds.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other operating expenses to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;
6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;

7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

LIPA will calculate the annual true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment. Should LIPA perform a mid-year true-up adjustment, LIPA will similarly calculate the mid-year true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next mid-year true-up adjustment.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period);
5. commencement of an involuntary bankruptcy or similar proceeding against the issuer which remains in effect for 90 days;
6. commencement of a voluntary bankruptcy or similar proceeding by the issuer; or
7. an action violating the financing order or state pledge.

Issuance of Additional Bonds

The issuer can issue up to $4.5 billion in restructuring bonds over four distinct financing orders. To the extent the amount authorized is not issued under this fourth and final financing order, additional financings may be authorized by new financing orders to be adopted at a later date. Each series of restructuring bonds that may be issued will be backed by separate restructuring property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of restructuring bonds. However, the issuer may not issue additional restructuring bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of restructuring property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the restructuring property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under Chapter 9 or any other provision of the Bankruptcy Code.

The issuer was formed solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.

The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from the Authority and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.

Sponsor and Seller

The Long Island Power Authority will be the securitization's sponsor and the seller of the restructuring property. The Authority is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a Chapter 9 debtor pursuant to its enabling legislation.

The Authority took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of the Authority through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

The Authority is governed by a Board of Trustees and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. The Authority is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

The Authority and LIPA are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LIPA conducts the electric business in the service area and is responsible for providing service to customers in the service area. The Authority and LIPA are also parties to an administrative services agreement pursuant to which the Authority provides personnel, personnel-related services and other services necessary for LIPA to provide electric service in the service area.

Administrator

LIPA will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. LIPA, as administrator, will be entitled to receive an annual administration fee of $100,000 payable annually, in arrears.

Securitization Structure Analysis

The key structural feature of this transaction is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage.

In this transaction, the strong true-up mechanism combined with nonbypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds. The operating reserve and debt service accounts provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of LIPA (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

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REPORT NUMBER 1033393

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CREDIT OPINION
16 June 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Duke Energy Florida Project Finance, LLC Series A Bonds

First Duke Energy Florida-Sponsored Utility Cost Recovery Bond

Capital Structure

Exhibit 1
Provisional (P) Ratings

Series	Provisional Rating	Expected Amount	Coupon	Legal Final Maturity Date
Series A 2018	(P)Aaa (sf)	$183,000,000	Fixed	3/1/2022
Series A 2021	(P)Aaa (sf)	$150,000,000	Fixed	9/1/2024
Series A 2026	(P)Aaa (sf)	$436,000,000	Fixed	9/1/2031
Series A 2032	(P)Aaa (sf)	$250,000,000	Fixed	3/1/2035
Series A 2035	(P)Aaa (sf)	$275,290,000	Fixed	9/1/2038
Total		$1,294,290,000		

The ratings address the expected loss posed to investors by the legal final maturity. In Moody's opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.
Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Summary Rating Rationale

We have assigned provisional ratings to the five classes of bonds (Series A bonds, or the bonds) that Duke Energy Florida Project Finance, LLC (the issuer) will issue. The issuer is wholly-owned by Duke Energy Florida, LLC (DEF; A3 Stable), a subsidiary of Duke Energy Corporation (Baa1 negative), one of the largest utility holding companies in the US. DEF formed the issuer to securitize a special charge on DEF customers' utility bills. The charge is imposed to recover certain costs associated with DEF's retirement of its Crystal River Unit 3 (CR3) nuclear power plant, including certain capitalized costs of the retired nuclear generating asset and ancillary costs and fees, as well as financing costs associated with this issuance. The Series A bonds will be the first utility cost recovery bonds sponsored by DEF.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 15 June 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

As a regulated utility, DEF is typically entitled to recover specified costs of acquiring, constructing and improving energy generating assets which are generally capitalized and recovered over the useful life of that asset. The Florida Public Service Commission (FPSC) has authorized DEF to recover a specified portion of DEF's remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the CR3 nuclear plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges (nuclear asset-recovery property) is the primary collateral backing the Series A bonds.

Our provisional ratings reflect our assessment of the legal and structural aspects of the transaction including the State of Florida's legislation, financing order and state pledge, the mandatory uncapped true-up mechanism, the relatively low level of the recovery charge as compared to prior rated utility cost recovery transactions, the large and diversified ratepayer base, and the credit quality of the servicer.

Credit Strengths

Strength of Legislation and Financing Order: The State of Florida's legislation (Section 366.95, Florida Statutes, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on December 19, 2015 permits the securitization and strongly protects the nuclear asset-recovery property securing the bonds. Similar to other utility cost recovery securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of Florida pledges to bondholders that it will not (1) alter provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of the nuclear asset-recovery property, or (3) except as authorized by the true-up adjustment mechanism, reduce, alter or impair nuclear asset-recovery charges until the bonds have been repaid in full (the state pledge). In addition, the securitization law and financing order contain the typical strong true-sale and security interest provisions.

FPSC's irrevocable financing order authorizes DEF to recover specified costs of retiring the CR3 nuclear plant by collecting nuclear asset-recovery charges. This nuclear asset-recovery property grants the issuer the right to impose, bill and collect, nonbypassable nuclear asset-recovery charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. In this context, nonbypassable refers to the requirement that the charges be levied on all of DEF's existing and future retail electric customers receiving transmission and distribution services in DEF's service area, including customers of any DEF successor or assignee, and even if a customer elects to purchase electricity from an alternative electric supplier following a deregulation of public utilities in Florida.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts nuclear-asset recovery charges semiannually (and quarterly after the last scheduled maturity date of the bonds of any series) to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time if the servicer deems necessary to ensure timely bond payments.

Relatively Low Recovery Charge: DEF expects the securitization's initial nuclear asset-recovery charge to represent around 2.5% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in DEF's service area will receive as of April 2016; this percentage charge is relatively low compared to charges in other utility cost recovery transactions. For context, the three most recent utility cost recovery bond issuances we rated, Utility Debt Securitization Authority, sponsored by LIPA, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 6.9%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in DEF's service area is a credit strength. The service area includes the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas. The service area primarily

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

includes a mix of residential customers (59% by revenue) and commercial customers (28% by revenue). Unlike most other utility cost recovery securitizations, the service area includes very few industrial customers (6% by revenue), which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Strength and Experience of the Servicer: We rate DEF A3 with a stable outlook. DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

Credit Challenges

Challenges to Securitization Law and Financing Order: Potential state and federal legislative and regulatory actions could weaken the legal protections of the nuclear asset-recovery property; however we view this risk as remote. Florida does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for FPSC to amend or revoke the financing order, would be through an amendment to the state constitution or a legislative action, either of which would violate the state pledge. The risk that the State of Florida would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

The people of the State of Florida have the right to amend the Florida Constitution through initiative powers. It is possible that the people of Florida, using their initiative powers, might amend or repeal the Florida Constitution in a manner affecting the securitization law. The process to propose a revision or amendment to the Florida Constitution by initiative is extremely burdensome. DEF is currently unaware of any efforts to amend the Florida Constitution in a manner which would affect the securitization law in any way.

On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (Section 366.93, Florida Statutes) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

We view the risk to bondholders from this litigation as remote. Several past challenges to securitization laws such as this have been unsuccessful, and even in the low likelihood event that this challenge is successful, the arguments put forward by the plaintiffs are generally not relevant to the securitization law.

Potential for Insufficient Collections: Collections arising from the nuclear asset-recovery property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. DEF's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur semiannually and on an interim basis as needed.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Nuclear asset-recovery property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from DEF or its successors or assignees
Service Area:	DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Series A Senior Secured Bonds
Amount:	$1,294,290,000
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Capital Subaccount
Transaction Parties	
Sponsor/Depositor/Servicer:	Duke Energy Florida, LLC
Issuer:	Duke Energy Florida Project Finance, LLC
FPSC Financial Advisor:	Saber Partners, LLC
Trustee:	The Bank of New York Mellon Trust Company, National Association

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Assets Overview

In February 2013, DEF announced it would close and decommission the CR3 nuclear power plant. The FPSC has authorized DEF to recover a portion of its remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges is the primary collateral (nuclear asset-recovery property) backing the Series A bonds.

The bonds are also secured by funds on deposit in the collection account, including the general subaccount, the capital subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds in respect to the pledged collateral.

Assets Description

The Securitization Law

In 2015, the Florida legislature enacted the securitization law, codified as Section 366.95, Florida Statutes. The securitization law allows electric utilities to access lower-cost funds through nuclear asset-recovery bonds pursuant to financing orders issued by the FPSC. One purpose of the securitization law is to lower the cost to customers associated with the long-term financing of costs incurred in connection with the early retirement or abandonment of a nuclear generating asset unit. The early retirement or abandonment must be deemed reasonable and prudent by the FPSC through a final order approving a settlement or other final order issued by the FPSC before July 1, 2017, and the pretax costs to be financed must exceed $750 million.

The securitization law permits DEF to impose irrevocable, binding, nonbypassable nuclear asset-recovery charges on all future and existing customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts sufficient to pay principal of and interest on the bonds and other administrative expenses of the offering. The FPSC governs the amount and terms for collections of these nuclear asset-recovery charges through one or more financing orders issued to DEF. Upon the issuance of the bonds these nuclear asset-recovery charges may not be reduced, impaired, postponed, terminated or otherwise adjusted by the FPSC except as adjusted pursuant to the true-up mechanism.

Florida and other states have passed legislation similar to the securitization law 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.

The securitization law provides that a valid and enforceable security interest in nuclear asset-recovery property will attach only upon the later of: the issuance of a financing order, the execution and delivery of a security agreement with the indenture trustee in connection with issuance of a series of bonds, and the receipt of value for such bonds. Although not governed by the UCC, upon filing notice with the Florida UCC registry the lien and security interest will be continuously perfected. The security interest will have priority in the order of filing and take precedence over any subsequent judicial or other lien creditor. No continuation statements are necessary to maintain such perfection. The servicer pledges in the servicing agreement to file in the Florida UCC registry on or before the closing date and the seller will represent that no prior filing has been made.

The Financing Order

The FPSC issued an irrevocable financing order to DEF on November 19, 2015. That financing order became final and non-appealable on December 19, 2015. Pursuant to the financing order, DEF established the issuer to be a bankruptcy-remote special purpose subsidiary to issue the nuclear asset-recovery bonds. In the financing order, the FPSC authorized the imposition and collection of nuclear asset-recovery charges on all DEF transmission and distribution customers. DEF, as initial servicer, will collect nuclear asset-recovery charges on the issuer's behalf and will remit the nuclear asset-recovery charges to the indenture trustee.

The FPSC expects the financing order to result in a substantial cost savings to ratepayers of $708 million or $1.95 per month for 1,000 kWh, versus the traditional method of cost recovery under current and expected market conditions. The financing order has been praised publicly by regulators and consumer advocacy groups, further insulating the financing order from challenge.

The State Pledge

The securitization law includes a pledge from the State of Florida to the bondholders that it will not (1) alter the provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of nuclear asset-recovery property; or (3) except as authorized by the true-up adjustment mechanism, reduce, alter, or impair the nuclear asset-recovery charges until the bonds have been repaid in full.

Any action of the Florida legislature adversely affecting the nuclear asset-recovery charges or the ability to charge or collect the charges would likely require the State of Florida to pay just compensation under the "takings clause" of the US and Florida Constitutions. The seller agrees that it will institute any action or proceeding necessary to compel performance by the FPSC, the State of Florida or any of their respective agents of any of their obligations or duties under the securitization law or any financing order.

The Nuclear Asset-Recovery Charges

The nuclear asset-recovery charges are nonbypassable, consumption-based charges separate and apart from DEF's base rates; the nuclear asset-recovery charges are to be paid by all existing and future customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts. Such customers must pay nuclear asset-recovery charges even if DEF goes out of business and its transmission and distribution services are taken over by another utility or if a customer elects to purchase electricity from an alternative electric supplier following a fundamental change in regulation of public utilities in Florida. No customer receiving transmission or distribution service from DEF can avoid the charge. The only way to avoid the charge is to disconnect from DEF's electric grid.

The nuclear asset-recovery charges are permitted to continue for 276 months from issuance, or until the bonds are paid in full. The expected scheduled final payment date for the Series A 2033 bonds is 240 months from issuance, providing up to an additional 36 months of nuclear asset-recovery charges if necessary to pay the bonds.

The Nuclear Asset-Recovery Costs

The nuclear asset-recovery charges authorized by the financing order allow DEF to recover nuclear asset-recovery costs related to retiring the CR3 nuclear plant located in Citrus County, Florida. CR3 was originally placed in service in 1977. In February 2013, DEF announced the early retirement of the project. DEF's unrecovered net investment in the project was approximately $1.6 billion. In October 2013, the FPSC approved a settlement agreement whereby DEF agreed to write-off approximately $300 million of its unrecovered net investment in CR3. The settlement agreement allowed DEF to recover its remaining unrecovered net investment in the project of approximately $1.3 billion over a 240 month period beginning no later than the first billing period of January 2017.

The nuclear asset-recovery costs financed by the bonds are equal to (i) the balance of the CR3 regulatory asset as of December 31, 2015 as allowed under the financing order minus (ii) $35,894,547, which, pursuant to the FPSC's Final Order PSC-16-0138-FOF-EI issued on April 5, 2016, shall not be included as part of the CR3 regulatory asset, plus (iii) carrying charges accruing at 6.0% per annum on the balance of the CR3 regulatory asset (adjusted as described in (ii) above) from December 31, 2015 through June 21, 2016.

Excluded from the amount being financed is $35,894,547 of costs claimed pursuant to Section 366.93, Florida Statutes. On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (366.93) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

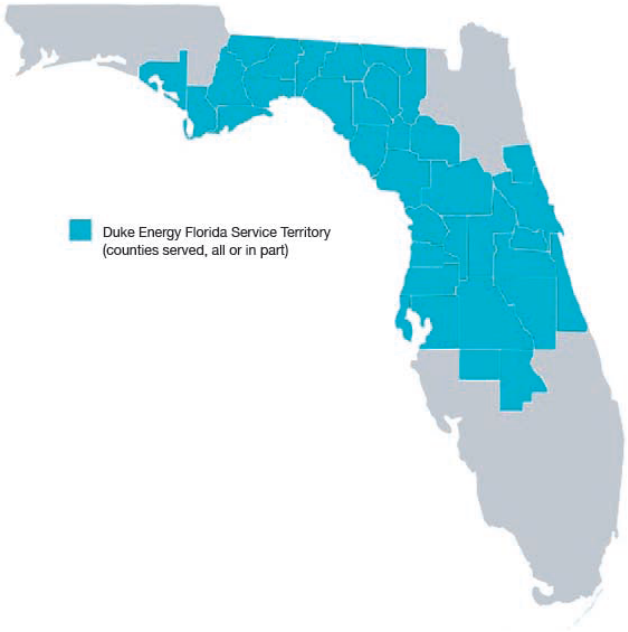
The suit claims DEF unlawfully charged customer higher rates to cover more than $1.2 billion in expenses at its Crystal River nuclear power plant and at its proposed (and now shelved) Levy County nuclear plant site. In addition to the suit seeking relief for nuclear recovery costs, it also seeks to nullify as unconstitutional the nuclear cost recovery system and all nuclear cost recovery orders issued by the FPSC, and it seeks an order enjoining defendants from further unlawful charges. The likelihood of the lawsuit prevailing is low considering other lawsuits challenging the constitutionality of Florida's nuclear cost recovery statute have been found to be without merit and rejected by Florida courts.

The Service Area

DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers. During the twelve

months ended December 31, 2015, DEF billed approximately 38.6 billion kilowatt hours of electricity to its covered electric customers in Florida, resulting in revenues of approximately $4.4 billion. Exhibit 4 below shows a map of DEF's service area.

Exhibit 4
Duke Energy Florida Service Area



Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Statutory Uncapped True-Up Adjustment Mechanism

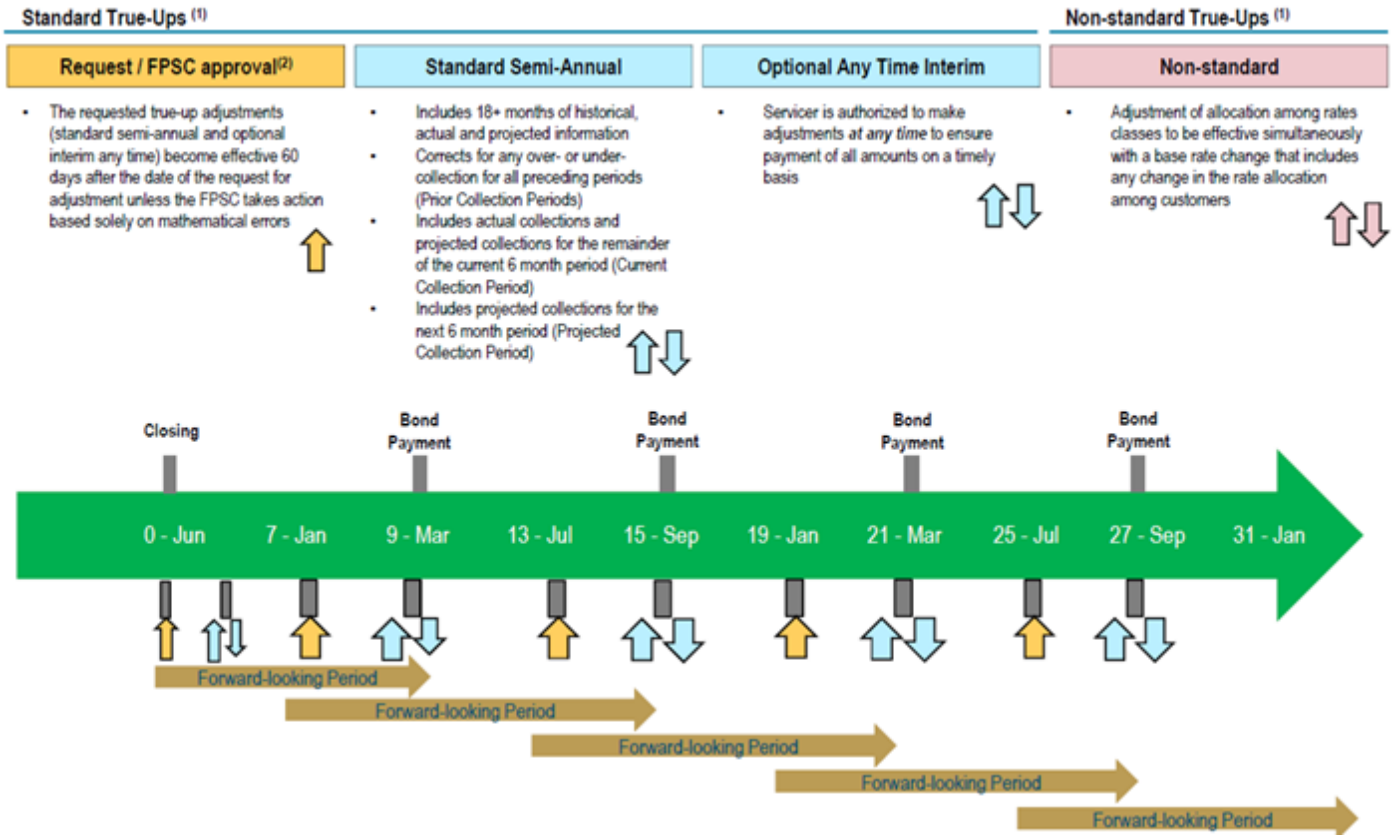
The securitization law and the financing order require that the issuer or DEF file with the FPSC at least semi-annually (and quarterly after the scheduled final payment date for the latest maturing bond) a letter applying the true-up mechanism to correct for any overcollection or undercollection of the nuclear asset-recovery charges and make any adjustments to ensure the recovery of revenues sufficient to provide for the timely payment of scheduled principal and interest on the bonds and other required amounts and charges. The FPSC's review of any adjustment request is limited solely to determining whether there is any mathematical error in the application of the formula-based mechanism.

Under the servicing agreement, the servicer will make adjustments to the nuclear asset-recovery charges at least semi-annually. In addition to the semi-annual true-up adjustment, the servicer is authorized to make interim adjustments at any time for any reason to ensure the timely payment on the bonds. In addition, the servicer will make a non-standard true-up adjustment to be effective simultaneously with a base rate change that includes any change in the rate allocation among customers used to determine the nuclear asset-recovery charges. Exhibit 5 below illustrates the true-up mechanism.

Under the irrevocable financing order, the FPSC guarantees it will act, as directed by the securitization law, to implement the true-up mechanism for making any adjustments that are necessary to correct for any overcollection or undercollection of the nuclear asset-recovery charges or to otherwise ensure the timely payment of principal of and interest on the bonds when due.

Exhibit 5

True-Up Mechanism



Source: DEF

Servicing

DEF will be the initial servicer of the bonds. DEF, as servicer, will be responsible for, among other things, calculating, billing, collecting and posting the nuclear asset-recovery charges from customers, submitting requests to the FPSC to adjust these charges, monitoring the collateral for the bonds and taking certain actions in the event of non-payment by a customer. The indenture trustee's receipt of collections in respect of the nuclear asset-recovery charges, which will be used to make payments on bonds, will depend in part on the skill and diligence of the servicer in performing these functions.

DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

DEF will be entitled to receive an annual servicing fee in an amount equal to 0.05% of the aggregate initial principal amount of the bonds. This servicing fee will be payable in equal installments on each semi-annual payment date, in arrears. If DEF or any of its affiliates is not the servicer, the successor servicing fee may be up to 0.60% of the initial principal amount of the bonds unless a higher fee is approved by the FPSC.

In the event of a servicer default, the indenture trustee, at the direction of a majority of bondholders or at the direction of the FPSC, may terminate the rights and obligations of the servicer under the servicing agreement. However, replacement of the servicer would require the agreement of the indenture trustee and the administrative agents under DEF's accounts receivable sale programs.

Credit, Billing and Budget Billing

DEF is required to provide transmission and distribution service to all qualified customers. First time customers establishing residential electric accounts are generally required to pay a deposit as are customers that do not satisfy threshold credit score requirements.

The amount of the deposit reflects the estimated use over a two-month period, which is the maximum DEF may collect by law. As a general rule, non-residential accounts require deposit coverage. Consumer credit is not used to determine credit worthiness on non-residential accounts.

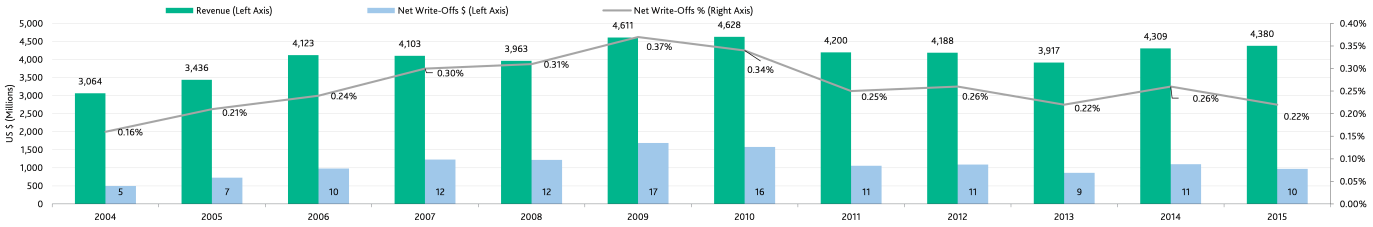
DEF bills its customers once every 24 to 39 days and distributes approximately 85,000 bills on each business day to its customers. Approximately 6% of DEF's residential customers choose to be billed using DEF's budget billing program. For these customers, DEF determines and bills a monthly budget based on the last twelve months of billing history for each account. Budget billing does not affect the amount of nuclear asset-recovery charges that the servicer remits to the indenture trustee on a daily basis.

Bills are due 21 calendar days after the issue date at which time they are considered delinquent. For the year ended December 31, 2015, approximately 6% of total billed retail revenue became eligible for disconnect and 1% was disconnected. Approximately 87% of accounts disconnected for nonpayment ultimately make full payment and have service restored. Unpaid final bills are written off approximately 30 days after the final bill is issued.

Exhibit 6 below shows net write-offs since 2004, which have ranged from a low of 16bps of billed revenue in 2004 to a crisis period peak of 37bps in 2009. DEF's forecast is 26 bps, consistent with the post-crisis performance history.

Exhibit 6

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: DEF

While more than 7.5% of customers are typically 30-59 days past due, by the third month most delinquencies are cured, with those still outstanding past 90 days well under 1% throughout the observation period. Exhibit 7 shows DEF customer delinquency data since 2005.

Exhibit 7

Delinquencies as a Percentage of Total Billed Revenues

	As of 2005	As of 2006	As of 2007	As of 2008	As of 2009	As of 2010	As of 2011	As of 2012	As of 2013	As of 2014	As of 2015
30-59 days	8.27%	8.51%	9.66%	8.41%	9.38%	7.82%	7.79%	7.59%	7.48%	7.79%	7.73%
60-89 days	0.92%	0.87%	1.12%	1.07%	0.78%	0.59%	0.57%	0.54%	0.59%	0.64%	0.57%
90+ days	0.52%	0.56%	0.90%	0.66%	0.51%	0.33%	0.22%	0.21%	0.28%	0.33%	0.33%
Total	9.71%	9.94%	11.68%	10.14%	10.67%	8.75%	8.58%	8.34%	8.35%	8.76%	8.63%

Source: DEF

Assets Analysis

Strong Service Area

This transaction benefits from the size and diversity of the ratepayer base within DEF's service area and the projected population growth and economic stability of the ratepayer base. During 2015, approximately 9% of DEF's total retail billed electric consumption was by industrial customers, approximately 31% was by commercial customers and approximately 52% was by residential customers, with other entities comprising approximately 8%. Exhibit 8 shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 8
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	57.91%	57.70%	56.85%	57.21%	56.94%	57.34%	59.72%	58.18%	56.96%	58.49%	58.85%	59.43%
Commercial	27.66%	27.57%	27.89%	28.06%	28.39%	28.46%	27.01%	28.10%	28.85%	28.11%	27.81%	27.51%
Industrial	7.65%	7.73%	7.98%	7.34%	7.31%	6.70%	6.14%	6.40%	6.53%	6.12%	6.10%	5.91%
Streetlighting	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%	0.04%	0.05%	0.04%	0.04%	0.04%
Public Authority	6.73%	6.95%	7.22%	7.34%	7.31%	7.44%	7.09%	7.28%	7.61%	7.24%	7.20%	7.11%

Source: DEF

For the year ended December 31, 2015, the ten largest retail electric customers represented approximately 8.3% of DEF's retail kilowatt-hour sales. There are no material concentrations in the residential class. As of the closing date, no customer or group of related commercial or industrial customers will be obligated to pay more than 10% of the nuclear asset-recovery charges.

Exhibit 9
Top 10 DEF Customers

	Industry	Energy Usage (MWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	Mining/Chemical Processing	691,591	1.79%	$46,289	1.06%
2	Education	456,852	1.18%	$37,972	0.87%
3	Retail Grocery	393,738	1.02%	$35,619	0.81%
4	Mining/Chemical Processing	340,470	0.88%	$23,343	0.53%
5	Education	252,072	0.65%	$27,720	0.63%
6	Retail Trade	250,016	0.65%	$24,409	0.56%
7	Stone/Clay/Glass	236,193	0.61%	$15,771	0.36%
8	Education	201,586	0.52%	$23,188	0.53%
9	Retail Grocery	199,997	0.52%	$19,744	0.45%
10	Government	175,246	0.45%	$16,124	0.37%
	Total	3,197,761	8.29%	$270,179	6.17%

Source: DEF

Remote Risk of Severe Ratepayer Base Declines

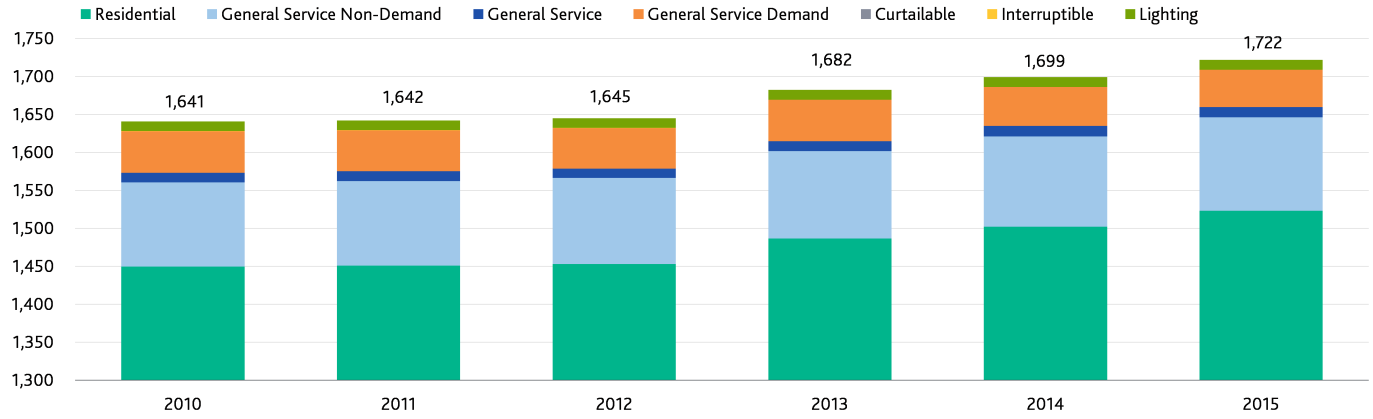
The ratepayer base is sensitive to many macroeconomic factors, including service area population and household formation growth, expected disconnects due to use of self-generation, changes in the service area and potential municipalizations. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Population Growth

Florida's robust population trend is a benefit to the transaction. According to the Census Bureau, the state's population grew an average of 1,000 residents per day in 2015. This 1.8% increase was the largest since 2006 and the strongest in the South. Despite the rapid rise, population growth will likely accelerate further because the pace remains historically weak. In the 50 years before the Great Recession, annual population growth in the state exceeded last year's pace by 47 times. Florida should also expect faster expansion because its cities appeal to Hispanics—the nation's fastest growing ethnic group—and retiring baby boomers— the fastest-growing age

group in the U.S. In 2015, for the third consecutive year, The Villages, Central Florida's retiree haven, was the nation's fastest growing metro area in population. Exhibit 10 shows that growth in the average number of DEF retail electric customers since 2010.

Exhibit 10
Average Number of Retail Electric Customers



Source: DEF

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of nuclear asset-recovery charges on other non-self-generating ratepayers. Based on existing legislation precluding the use of third-party owned solar equipment, DEF expects the estimated cost of self-generation for customers, combined with the practical obstacles to installing on-site generation, to limit self-generation from being installed by any meaningful number of customers within the service area. DEF forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The nuclear asset-recovery charge will be recoverable from all DEF customers taking transmission or distribution service from DEF. Thus, if the service area expands in the future, the new DEF customers would be subject to the nuclear asset-recovery charge on a going-forward basis. Pursuant to the financing order, any successor to DEF is required to perform all obligations and have the same rights under the financing order as DEF, including the collection of the nuclear asset-recovery charges from customers and payment of appropriate amounts to the issuer.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges and the likelihood that even after a municipalization, DEF's transmission and distribution services will continue to be used. While multiple municipal utilities exist in Florida, DEF is unaware of any municipality that has municipalized, or attempted to municipalize, a portion of an investor-owned utility's service territory in the absence of an agreement. One municipality, the City of Winter Park, was municipalized pursuant to such an agreement. DEF previously had a franchise agreement that provided Winter Park with a unilateral purchase option at the expiration of the franchise agreement. In the instance of the Winter Park municipalization, DEF sought affirmative permission from the FPSC to be relieved of its obligation to serve the City of Winter Park, which the FPSC subsequently approved. Any municipality using DEF's transmission and distribution system following a municipalization will be considered a successor and its customers will be subject to the nuclear asset-recovery charge.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact DEF's operations, temporarily interrupting transmission, distribution and consumption of

electricity, hence reducing the collections of nuclear asset-recovery charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the DEF service area, which could cause the per-kWh nuclear asset-recovery charge to be greater than expected.

The only year with any significant loss of energy consumption due to natural disasters was 2004, when a series of three Hurricanes struck the DEF service area. The impacts came from "Charley" (Aug 13-20), "Frances" (Sep 4-10) and "Jeanne" (Sep 25-30). Estimated lost energy sales came from studying reduced levels of daily system requirements totaling 400,000 MWh over these three disasters. This represents about 1% of the total annual electric usage for 2004 (38,193 GWh).

Forecasting Electricity Consumption

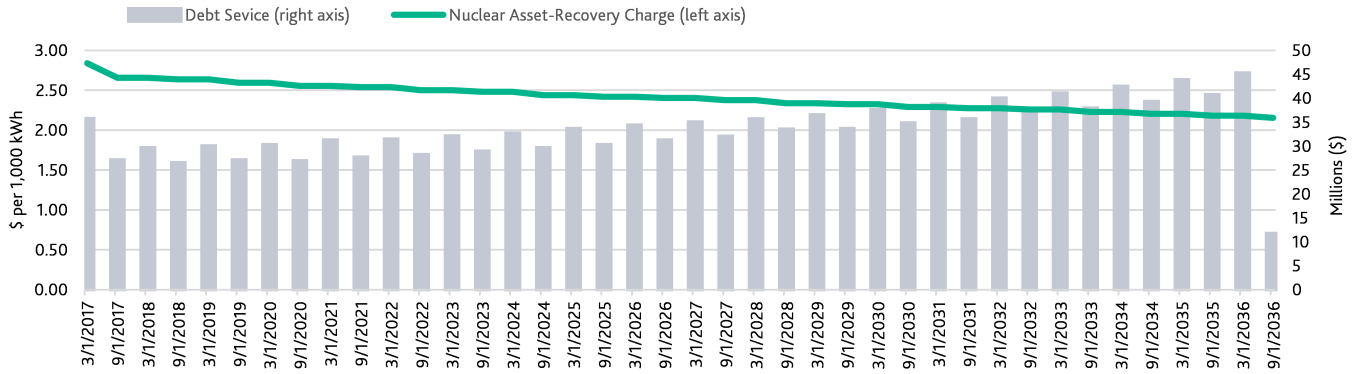
The nuclear asset-recovery charges are assessed based on forecasted customer usage. The amount and the rate of nuclear asset-recovery charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs. If the servicer inaccurately forecasts electricity consumption or underestimates customer delinquency or write-offs when setting or adjusting the nuclear asset-recovery charges, there could be a shortfall or material delay in nuclear asset-recovery charge collections prior to the next true-up.

The forecast utilized in the proposed bond structure is the 2016 Ten Year Site Plan filed with the FPSC in April 2016. Internal forecasts are updated at least twice per year but are not filed with the FPSC. The DEF forecast of customers, energy sales, and peak demand applies both an econometric and end-use methodology. External sources of data include economic series from Moody's Analytics and State population data from the University of Florida's Bureau of Economic & Business Research. Internal company forecasts are used for projections of electricity price, and weather conditions. The forecast incorporates population and household trends, employment and production trends, technology and energy efficiency trends, and weather and climate trends. DEF has a more granular forecast for the phosphate industry, at the customer level, due to the high concentration of customers in this industry among DEF's industrial customer base.

Exhibit 11 shows the forecasted nuclear asset-recovery charge per 1,000 kWh and scheduled debt service payments.

Exhibit 11

Nuclear Asset-Recovery Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: DEF; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Without an interim true-up adjustment, greater than 60% forecast variance would be needed leading up to any payment date to cause a payment default. Greater than 65% forecast variance would be needed in the first payment period to cause a payment default, assuming the servicer makes an interim true-up adjustment midway into the first payment period. By contrast the maximum forecast variance since 2011 has been less than 6%, as shown in Exhibit 12.

Exhibit 12
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	0.27%	-0.23%	-0.08%	2.14%	1.92%
Commercial	2.00%	0.82%	0.80%	1.40%	0.44%
Industrial	-3.09%	1.56%	-1.88%	3.87%	-3.25%
Public Authority	-2.40%	5.92%	0.50%	1.00%	-0.65%

Source: DEF

Cash Flow Analysis

We examined the cash flows that the nuclear asset-recovery charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the nuclear asset-recovery charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the nuclear asset-recovery charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the nuclear asset-recovery charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the nuclear asset-recovery charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the nuclear asset-recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Even in our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the nuclear asser-recovery charge is less than 7%.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the projections by DEF, which increases annually by a compounded 1 - 1.5%, through bond maturity
2. Implied net charge-offs of 0.2615%
3. Collection Curve projects 13.3% of collections within 30 days and 86.4% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains DEF or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case
4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year
5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

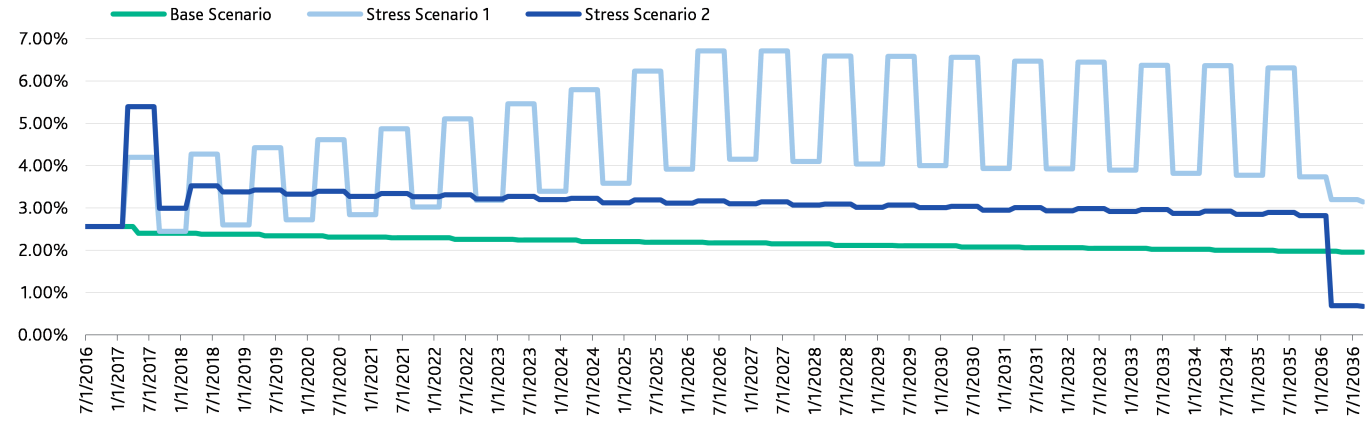
1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case
3. Collection curve is the same as in base case
4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 13 shows the projected nuclear asset-recovery charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 14 shows the projected nuclear asset-recovery charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 13

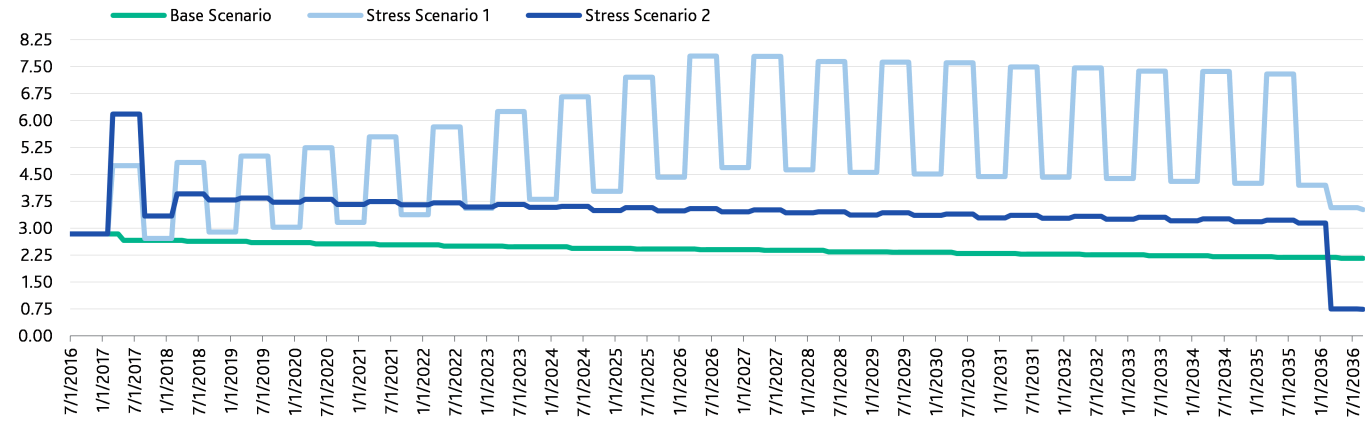
Nuclear Asset-Recovery Charge as a Percentage of a 1,000 kWh Customer's Total Bill



Source: DEF; Moody's calculations

Exhibit 14

Nuclear Asset-Recovery Charge ($ per 1,000 kWh)



Source: DEF; Moody's calculations

Comparables

As shown in Exhibit 15, stress scenario 1 is more stressful and results in a peak nuclear asset-recovery charge equal to about 6.94% of a 1,000 kWh per month customer's bill. This is low compared to other utility cost recovery deals.

Exhibit 15
Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2016A	7.21%	16.04%	10.40%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

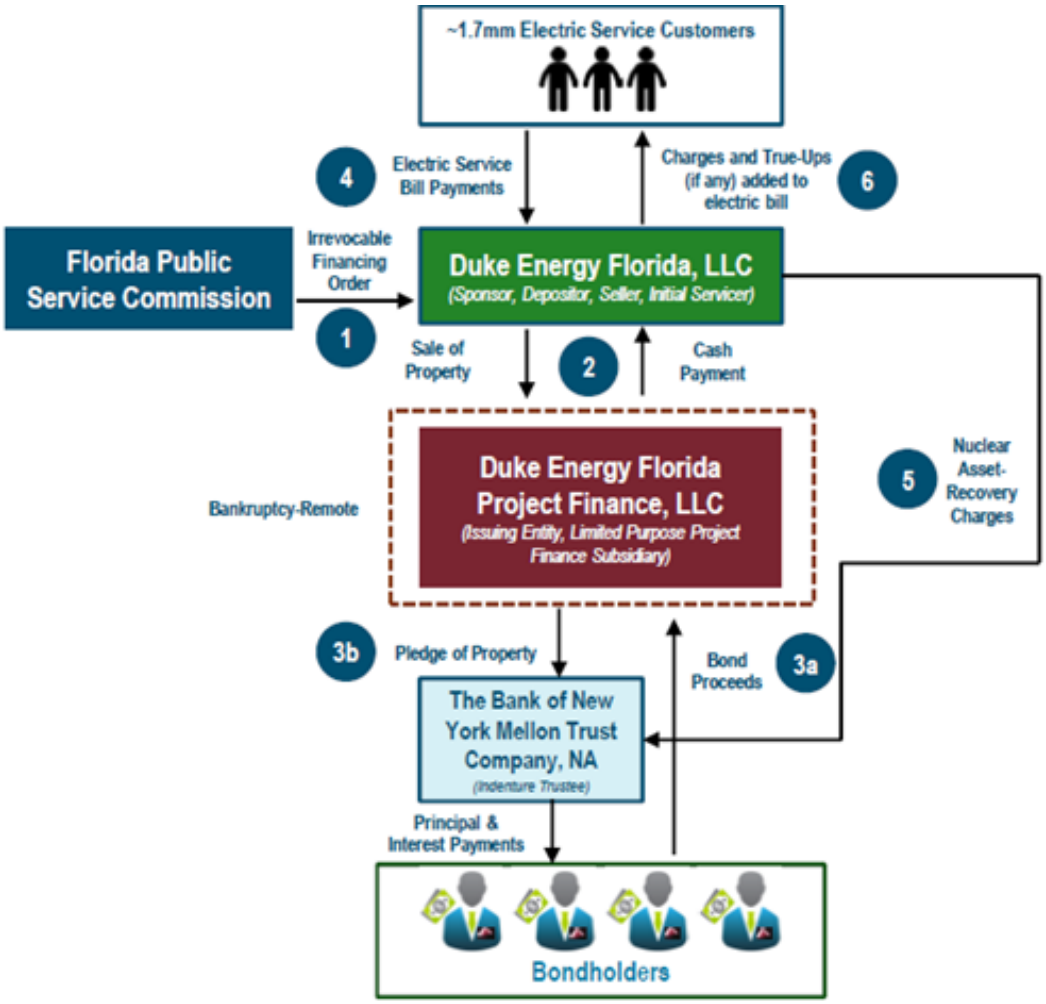
On the closing date, DEF will sell the nuclear asset-recovery property to the issuer pursuant to a sale agreement between the issuer and DEF. DEF will service the nuclear asset-recovery property pursuant to a servicing agreement between the issuer and DEF.

Securitization Structure Description

Structural Diagram

Exhibit 16 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 16
Structural Diagram



Source: DEF

1. FPSC issues financing order, permitted under state statute, that creates nuclear asset-recovery property in the hands of DEF
2. Via a true sale, DEF transfers the nuclear asset-recovery property to the issuer in exchange for cash payment
3. (a) Nuclear asset-recovery bonds issued in exchange for cash payment from bondholders (b) Nuclear asset-recovery property is pledged to indenture trustee for benefit of the bondholders
4. Electric utility customers pay charge on electricity bills on joint and several basis
5. Payments from electric utility customers used to pay principal and interest on the bonds
6. At least semi-annually, and, as frequently as monthly (any time), charge on all electricity customers adjusted to whatever level necessary (i.e., not subject to cap) to ensure timely principal and interest payments on the bonds

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the capital subaccount. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Capital Subaccount

On or before the date of issuance of the bonds, DEF will make a capital contribution to the issuer in an amount not less than 0.5% of the initial principal amount of the bonds, which will be deposited in the capital subaccount. Under the financing order, DEF will be entitled to a return on this capital contribution equal to the rate of interest on the latest maturing bond and payable according to the priority of payment set forth in the indenture and the series supplement.

Cash Commingling

The servicer is entitled to commingle the nuclear asset-recovery charges that it receives with its own funds until the funds are remitted to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from nuclear asset-recovery charges with other funds.

The servicer will remit nuclear asset-recovery charges based on estimated collections using a weighted average balance of days outstanding on DEF's retail bills. Nuclear asset-recovery charge collections remitted will represent the charges estimated to be received for any period based upon the average days outstanding and an estimated system-wide write-off percentage.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated nuclear asset-recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the indenture trustee within two business days.

Payment Priority

On each payment date, the indenture trustee will pay all amounts on deposit in the general subaccount of the collection account in the following order of priority:

1. payment of the indenture trustee's fees, expenses and outstanding indemnity amounts in an amount not to exceed annually $500,000 in the then current calendar year;
2. payment of the servicing fee plus any unpaid servicing fees from prior payment dates;
3. payment of the administration fee to the extent due on that payment date and of the fees of our independent manager plus any unpaid administration or management fees from prior payment dates;

4. payment of all of our other ordinary periodic operating expenses;
5. payment of the interest then due, including any past-due interest;
6. payment of the principal required to be paid on the final maturity date for each series or as a result of acceleration upon an event of default;
7. payment of the principal then scheduled to be paid in accordance with the expected sinking fund schedule, including any previously unpaid scheduled principal, paid pro rata among the bonds if there is a deficiency;
8. payment of any of our remaining unpaid operating expenses and any remaining amounts owed pursuant to the basic documents;
9. replenishment of any amounts drawn from the capital subaccount;
10. release to DEF of an amount equal to the rate of return on the amount contributed to the capital subaccount, including any portion of such rate of return for any prior payment date that has not yet been paid, so long as no event of default has occurred and is continuing; and
11. allocation of the remainder collected, if any, to the excess funds subaccount for future payments.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. a default for five business days in the payment when due of any interest on any bond;
2. a default in the payment of the then unpaid principal with respect to any series on the final maturity date for that series;
3. a default in the observance or performance of any covenants or agreements made by the issuer in the indenture or the series supplement (other than defaults described above) which continues for 30 days;
4. any representation or warranty made by the issuer having been incorrect in any material respect as of the time made, and such breach not having been cured within 30 days;
5. certain events of bankruptcy, insolvency, receivership or liquidation with respect to the issuer; or
6. a breach by the State of Florida or any of its agencies (including the FPSC), officers or employees that violates the pledge of the State of Florida.

Issuance of Additional Bonds

As authorized by the financing order, the issuer's organizational documents and the transaction documents give the issuer authority and flexibility to issue additional nuclear asset-recovery bonds in future transactions, with the approval of the FPSC. Each series of nuclear asset-recovery bonds that may be issued will be backed by separate nuclear asset-recovery property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of nuclear asset-recovery bonds. However, the issuer may not issue additional nuclear asset-recovery bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of nuclear asset-recovery property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the nuclear asset-recovery property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The issuer's limited liability company agreement requires that it have at least one independent manager, whose selection and replacement will be subject to ratification by the FPSC. The limited liability company agreement does not permit the issuer to engage in any activities not directly related to purchasing and owning the nuclear asset-recovery property and issuing one or more series of nuclear asset-recovery bonds. The list of permitted activities set forth in the limited liability company agreement may not be altered,

amended or repealed without the affirmative vote of a majority of the managers, which vote must include the affirmative vote of the independent manager.

Sponsor and Seller

DEF is the sponsor of the transaction and the seller of the nuclear asset-recovery property. DEF, a Florida limited liability company, is a regulated public utility primarily engaged in the generation, transmission, distribution, and sale of electricity in portions of Florida. DEF is an indirect, wholly-owned subsidiary of Duke Energy Corporation, one of the largest regulated utility holding company in the US.

DEF is subject to the jurisdiction of the Florida Commission with respect to retail utility rates, accounting, utility services, certain facilities, certain asset transfers, certain corporate mergers and other matters. DEF is subject to the jurisdiction of the Federal Energy Regulatory Commission under the Federal Power Act with respect to acquisitions, operations and disposals of certain assets and facilities, services provided and rates charged, conduct among affiliates and other matters, and its nuclear power plant is also subject to the jurisdiction of the Nuclear Regulatory Commission.

Administrator

DEF will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. DEF, as administrator, will be entitled to receive an annual administration fee of $50,000 payable annually, in arrears. The administrator may not resign or be removed without satisfaction of the rating agency condition.

Securitization Structure Analysis

The Series A bonds are a relatively simple sequential structure without subordination and the capital subaccount provides sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of DEF (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating

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REPORT NUMBER 1031259

MOODY'S
INVESTORS SERVICE

Standard & Poor's Reviews, Affirms, 68 Classes From 31 Stranded Cost Transactions

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OVERVIEW

- We affirmed our ratings on 68 classes from 31 stranded cost securitizations.
- All of the transactions are backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts supporting our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations.

NEW YORK (Standard & Poor's) Feb. 25, 2013--Standard & Poor's Ratings Services today affirmed its ratings on 68 classes from 31 stranded cost securitizations (see list).

The affirmations reflect the transactions' ongoing stable performance and their continued ability to pay interest and principal in a manner commensurate with an 'AAA (sf)' rating stress, in our view.

Stranded cost securitizations are typically backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts. As currently constructed, the enhancement supports our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations. These securities traditionally have been created under state legislation in conjunction with the state utility commission, with the utility as the

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seller/servicer of the assets. Key features of the deals include:

- There are irrevocable statutory provisions and regulatory approvals, including the creation of mandatory periodic true-up of a nonbypassable transition charge and an absolute transfer and first-priority security interest in transition property;
- The true-up mechanisms are in place to ensure the transition charge can be adjusted to reflect any deficit in collections, as well as any other credit enhancement accounts; and
- There are typically cross-collateralization features such that all the customer classes help pay down the bonds. There may be certain deals that have rate caps and/or do not allow cross-collateralization.

For more information on legal and economic defeasance, please see "Securitizing Stranded Costs," published Jan. 18, 2001 on RatingsDirect.

As part of our regular surveillance, we reviewed and affirmed 68 classes from 31 stranded cost transactions.

Standard & Poor's will continue to monitor the securitizations and take rating actions as we deem necessary according to our criteria.

STANDARD & POOR'S 17G-7 DISCLOSURE REPORT

SEC Rule 17g-7 requires an NRSRO, for any report accompanying a credit rating relating to an asset-backed security as defined in the Rule, to include a description of the representations, warranties and enforcement mechanisms available to investors and a description of how they differ from the representations, warranties and enforcement mechanisms in issuances of similar securities. The Rule applies to in-scope securities initially rated (including preliminary ratings) on or after Sept. 26, 2011.

If applicable, the Standard & Poor's 17g-7 Disclosure Report included in this credit rating report is available at http://standardandpoorsdisclosure-17g7.com

RELATED CRITERIA AND RESEARCH

- Standard & Poor's To Explicitly Recognize Credit Stability As An Important Rating Factor, Oct. 15, 2008
- Principles-Based Rating Methodology for Global Structured Finance Securities, May 29, 2007
- Legal Criteria For U.S. Structured Finance Transactions: Special-Purpose Entities, Oct. 1, 2006
- Securitizing Stranded Costs, Jan. 18, 2001

RATINGS AFFIRMED

AEP Texas Central Transition Funding II LLC
A
Rating

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A2	AAA (sf)
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

AEP Texas Central Transition Funding LLC
2002-1

	Rating
A-4	AAA (sf)
A-5	AAA (sf)

Atlantic City Electric Transition Funding LLC
2002-1

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Atlantic City Electric Transition Funding LLC
2003-1

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Centerpoint Energy Restoration Bond Company, LLC

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

CenterPoint Energy Transition Bond Company II LLC
A

	Rating
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

CenterPoint Energy Transition Bond Company LLC
2001-1

	Rating
A4	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

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Consumers Funding LLC
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Detroit Edison Securitization Funding LLC (The)
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Entergy Gulf States Reconstruction Funding I LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Entergy Texas Restoration Funding, LLC
Senior Secured Transition

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

FPL Recovery Funding LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding II LLC
2006-A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding LLC
2002-A

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Louisiana Public Facilities Authority-EGSL
2008

	Rating
A-1	AAA (sf)

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A-2	AAA (sf)
A-3	AAA (sf)

Louisiana Public Facilities Authority-ELL
2008

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Massachusetts RRB Special Purpose Trust 2005-1
2005-1

	Rating
A-4 BEC	AAA (sf)
A-4	AAA (sf)
A-4 CEC	AAA (sf)

Massachusetts RRB Special Purpose Trust WMECO-1

	Rating
A	AAA (sf)

MP Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

MP Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PE Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

PE Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PSE&G Transition Funding II LLC
2005-1

	Rating
A-3	AAA (sf)

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A-4	AAA (sf)

PSE&G Transition Funding LLC
2001-1

	Rating
A-6	AAA (sf)
A-7	AAA (sf)
A-8	AAA (sf)

PSNH Funding LLC
2001-1

	Rating
A-3	AAA (sf)

Rockland Electric Company Transition Funding LLC
2004-1

	Rating
2004-1	AAA (sf)

RSB BondCo LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2003-1

	Rating
A-4	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2004-1

	Rating
A-3	AAA (sf)

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Securitizing Stranded Costs

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Securitizing Stranded Costs

*(**Editor's Note:** We originally published this criteria article on Jan. 18, 2001. We've republished it following our periodic review completed on Dec. 1, 2016. As a result of our review, we updated the contact information and the related criteria, and corrected a reference in the section "Adequate Provision.")*

Electric utilities historically have enjoyed protected monopolistic status, in return for an obligation to provide service to the customer base whenever requested. In return, utilities have made significant long-term investments and entered into long-term power purchase contracts with the expectation that these would be recoverable through customer rates. In 1992, the enactment of the National Energy Policy Act introduced wholesale electric competition into the industry. Since then, almost half the states have taken steps toward a competitive retail market by legislating or ordering frameworks for "retail access," through which all customers will be able to choose their own electric generation supplier. With a competitive market taking shape, many utilities have found themselves saddled with significant unrecoverable contractual and sunk costs, generically known as stranded costs. These stranded costs are not new, but rather have already been approved by regulators and are incorporated in existing utility rates as part of traditional cost-plus regulation. If utilities are to compete in a deregulated market, however, they cannot pass these stranded costs along to customers. In many cases, the inability of a utility to recover a significant portion of these costs would result in significant financial deterioration, and in the worst cases, insolvency.

As noted, many legislatures and state regulatory commissions have established the means by which utilities can avert financial deterioration while also providing customers with lower rates. Asset-backed securitization is one such alternative. In several states, such as California, Pennsylvania, Massachusetts, Texas, New Jersey, Michigan, New Hampshire, Connecticut and Illinois, legislatures have enacted laws that enable utilities to finance the recover-y of at least a portion of their stranded costs by issuing bonds backed by a statutory right to recover stranded costs.

In December 1997, the three California investor-owned utilities: Pacific Gas & Electric Co., Southern California Edison Co., and San Diego Gas & Electric Co., securitized more than $6 billion of their approximately $28 billion of total stranded investment. During 1998, Illinois Power Co. securitized $864 million followed by Commonwealth Edison Co.'s $34 billion securitization transaction. In 1999, one Massachusetts utility and three Pennsylvania utilities completed securitization transactions. Boston Edison Company issued $725 million of rate reduction certificates. PECO Energy Co. issued $4 billion, PP & L Inc. issued $2.42 billion and West Penn Power Company issued $600 million of transaction bonds. In 2000, PECO issued an additional $1 billion and in 2001, utilities in New Jersey, Connecticut, Michigan, and Texas may come to market with rate reduction bonds.

Utilities in states that have not yet addressed industry restructuring through legislative action or regulatory order, such as Indiana, Kentucky, Florida, and North Carolina, are generally low-cost producers with limited, if any, stranded assets. These states are much less motivated, therefore, to pursue industry restructuring, let alone securitization, at the present time. Whether or not these states ultimately pass relevant legislation, however, the relative competitive standing of their utilities will inevitably be diluted as high-cost utilities in other states shed a substantial portion of their high-cost assets through securitization.

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Standard & Poor's believes that securitization of stranded costs is at least neutral, and generally positive for utility credit quality. The utility acquires cash up front, instead of receiving an increasingly at-risk revenue stream over time. Proceeds of the securitization are expected to be used principally to shrink a utility's total capitalization structure, including retiring debt that carries a higher coupon than that borne by the highly rated securitized bonds. In most cases, these interest savings are passed along directly to customers in the form of lower rates. Generally, the amount of rate reduction bonds that the utilities issued was designed specifically to generate a legislatively mandated rate reduction for customers.

Business and Legal Overview

What Are Stranded Costs?

Stranded costs are broadly defined to include any costs that were incorporated in the traditional regulatory cost-plus scheme that cannot be passed on to customers in a competitive marketplace. The most significant of these stranded costs are investments in high-cost nuclear and fossil plants. They also include deferred and capitalized operating costs, conservation and economic development expenditures, nuclear decommissioning costs, and long-term contractual obligations with high cost nonutility generators.

In the past, utilities constructed large, centrally located plants to gain economies of scale in producing electricity. Extremely long construction lead times and overly aggressive demand forecasts caused management to err on the side of oversupply to meet customer demand. Furthermore, the monopoly environment meant utilities lacked a strong incentive to contain costs. Indeed, the larger a utility's rate base was, the more investment on which the utility could earn a return. In addition, costs were exacerbated by circumstances. The last round of base-load construction occurred in the late 1970s and early 1980s, which was an era of high inflation and high interest rates. Finally, the nuclear incident at Three Mile Island in 1979 resulted in heightened Nuclear Regulatory Commission supervision, extending the timetable for plant completions and elevating capital costs significantly.

Since that time, new technologies have greatly reduced the cost of building generating facilities. Even more importantly, the economics of building smaller plants have continued to advance. The lead time for construction has been drastically reduced, from as much as 10 years to as little as 18 months. This reduction is in part due to the construction of much smaller-scale highly efficient plants. As a result, the cost of incremental generation today is significantly lower than the embedded cost of plant of most utilities. The differential is most evident in nuclear plants. For instance, the 1,143 megawatt (MW) Nine Mile Point 2 nuclear plant, operated by Niagara Mohawk Power, was completed in 1988 at a cost of about $5,000 per kilowatt (kW), after a construction period of more than 10 years. This compares with a 500 MW gas-fired combined-cycle plant today that can be built in about 18 months at a cost of $450 to $550 per kW. While prudency hearings did lead to significant write-offs during the rate base proceedings of Nine Mile Point 2, the bulk of these costs were simply included in rates and are now being recovered from customers over a lengthy period of time.

Developments in Industry Environment

The enactment of the National Energy Policy Act of 1992 (NEPA) marks the beginning of the end of the last major government-protected monopoly. NEPA authorized the Federal Energy Regulatory Commission (FERC) to mandate

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that utilities become open-access common carriers for wholesale electric sales, known as wholesale wheeling. Wholesale sales are bulk power sales between utilities or between a utility and a third-party producer. If two utilities are not interconnected, they would need access to a third party's transmission network to complete such a transaction.

The ability of a utility to sell power to an end user that is not within its franchise service territory, or the sale of power from an independent power producer to an end user, is called "retail wheeling." Currently, utilities are not permitted to engage in retail wheeling. However, retail customers, aware that there may be cheaper power sources than their current supplier, are pressuring state regulators to permit them to buy power from alternative suppliers. While most regulators agree that competition will lower the price of power, some assert that the objective is not merely to lower rates, but to provide customers with the option to choose their power provider. The vast majority of utilities and regulators concur that retail wheeling is inevitable, so states have had to grapple with how to make the transition from a regulated to a competitive environment. As mentioned earlier, many states have passed laws to phase in direct access to all customers and most of these legislative initiatives include securitization of stranded costs as a means of reducing utilities' financial exposure to a competitive retail environment.

Recovery of Stranded Costs

Vertically integrated electric utilities provide customers with three basic functions: generation, transmission, and distribution. Because of legal, regulatory, and technological advances, generation no longer displays monopoly characteristics. Transmission and distribution, or the "wires" function, on the other hand, will likely remain natural monopolies for the foreseeable future since it would be prohibitively expensive, and environmentally difficult, to construct redundant wires. Transmission consists of the high-voltage system that moves power in bulk from generating plants to an electric distribution system or a load center. Distribution receives stepped-down power, which is then transported at lower voltages to individual end users.

As part of various state legislative initiatives, utilities are being required to functionally, if not legally, disaggregate the vertically integrated components of their business. The costs of each function will be determined and itemized, or "unbundled," on customers' bills. While customers may purchase the actual electrons from a source other than their local utility, they must continue to transport this power over the distribution wires owned by their local utility. The local utility will use its wires system to charge customers for the services it provides, which will include transmission of power bought from other suppliers. Other services, such as billing and metering, could be maintained by the utility or could be opened to competition as well. Any stranded cost that is identified, isolated, and by mandate recoverable in utility rates, will also be recovered as a "wires charge;" it cannot be recovered as part of a generation charge, since customers may purchase generation from an alternative source.

Stranded costs, which have been realized as such only with the prospect of a competitive market, are included in current utility rates, but they are being amortized over as long a period as 30 to 40 years. Utilities need to accelerate the recovery of these above-market costs as quickly as possible if they are to lower their rates in preparation for a competitive environment.

Statutory Securitization of Stranded Costs

Until now, securitization of stranded assets has been made possible by state statute. In general, such statutes provide that the stranded assets themselves, plus interest on any bonds backed by stranded assets, the costs of servicing the

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bonds, and the costs of bond issuance all be collected through imposition of a tariff that is collectible from the utility's customers. While differing in particulars, the legislation in Pennsylvania, California, Illinois, Massachusetts, Texas, Connecticut, New Jersey, and elsewhere shares certain characteristics that are significant from a rating perspective.

The statutes specifically provide for securitization of the stranded costs through their sale to a financing subsidiary, and ultimately, to a trust that issues the bonds. The statutes award true sale status to the transfer of the stranded assets to a finance subsidiary. This should help support the legal conclusion that the transfer constitutes a true sale for bankruptcy purposes.

The statutes also provide that any proposal for a securitization of stranded assets be approved on an irrevocable basis by the relevant utility regulatory commission. The commission must set a tariff schedule. A tariff would be included in the ordinary bills sent to customers, and would amortize the stranded assets over the life of the proposed securitization. The tariff would be a separate itemized charge on the customer's bill, and could be either a fixed charge or tied to electricity usage, in either case included in the utility's wires charge. In scheduling the tariff needed to amortize the assets fully, the commission will take into account the utility's forecast regarding the projected size and demographics of its customer base. Where the tariff is tied to electricity usage, predicted customer usage will be important.

The tariffs that are actually collected from customers may fall short of what was originally anticipated. In addition to defaults in bill payments, the customer base might decline due to economic and/or technological factors, or usage might vary from what was originally predicted. This might happen, for instance, if the winter is unusually warm or the summer particularly cool. These are credit risks that could impact the ability of the tariff to amortize the assets fully. To address these risks, the legislatures have created a statutory form of credit support, known as the "true-up" mechanism. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers, so that the bond amortization schedule is met. This minimizes credit risk, except in the tail end of the transaction after the final true-up has occurred. Liquidity risk will, of course, exist during the periods between true-ups, to the extent that collection shortfalls occur.

The true-up mechanism also may effectively minimize prepayment risk. While there may be a tariff collection shortfall, it is also conceivable that excess collections may be received. This might occur, for example, if the customer base grows at a greater rate than originally anticipated when the tariffs were established. If collections exceed expectations for a particular period, the true-up mechanism could potentially reduce the remaining tariffs accordingly, so that the remaining transaction amortizes as scheduled.

When the utility applies for a true-up, the commission may not grant it immediately. The commission's delay will add to liquidity risk, because the shortfalls in collections to be remedied by the true-up will last for a longer period, until the commission finally grants the true-up. A delay by the commission will not create credit risk during the transaction, because once the true-up is in place, the adjusted tariff will take into account any collection shortfalls caused by its delay. But a delay in the true-up could result in a credit loss at the tail end of the transaction. The commission might take so long to grant the true-up that the final true-up never occurs. The statutes prevent this potential credit loss, as well as limit liquidity risk caused by a delay, by setting a deadline for implementation of the true-up. For example, California requires that the commission implement a true-up within 90 days of each anniversary date of the

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transaction. Other statutes simply require that the true-up filing with the commission becomes effective as early as the subsequent month.

The duration of these transactions and the ability to impose true-up periods and tariff collections indefinitely depend initially on whether the statutes impose a limit on how long the tariff may be collected from the utility's customers. Even where no limit is set as a statutory matter, the final true-up period, and the deadline for tariff collection, will depend on the legal final maturity date set for the bonds.

A utility might change hands for some reason, or file under Chapter 11 of the U.S. Bankruptcy Code. Such an event could strike at the heart of a potential securitization. Stranded assets will not be recovered unless the utility continues to provide electricity, bill its customers, transfer the tariff to the securitization trust, and apply for true-ups when necessary. The statutes address this problem by requiring that any successors to the utility, whether through bankruptcy, merger, or sale, must perform all of the utility's obligations in connection with the securitization.

The statutes provide another feature, by providing that, contrary to what would usually occur under the Uniform Commercial Code (UCC), there is a continued security interest in collections that have been commingled with other funds of the utility. This eliminates the usual credit risk associated with commingled funds in the event of a bankruptcy of the utility, although it fails to alleviate the liquidity risk and potential credit risk caused by the automatic stay (see Protection Against Credit Risk Caused By Commingling).

Finally, the statutes purport to create new property interests that must be perfected in a manner different from a UCC security interest. However, there is the possibility that stranded assets might still be considered subject to the prior lien of existing mortgage bonds. As a result, proceeds of the securitization might need to be applied to pay down the debt secured by the prior lien. This would, in any event, be positive from a credit perspective, because the bonds being retired (typically general obligation bonds bearing the rating of the utility) would have a higher interest rate than the 'AAA' rated securitized bonds used to retire the obligations.

Significance of Statutory Securitization

To date, stranded cost securitizations rated by Standard & Poor's have been based on legislation promulgated specifically for that purpose. Nevertheless, Standard & Poor's understands that, as a regulatory matter, state public utility commissions have, de facto, historically permitted recovery of stranded costs through rate adjustment.

While public utility commission regulatory action may well be sufficient to accomplish a securitized recovery of stranded costs, Standard & Poor's believes that there may be certain advantages to a legislation-backed securitization. Statutes have the benefit of having undergone the political process. Affected interests are given the opportunity to introduce, and argue for, their respective views. Hearings, drafting and amendments, floor debate, and overall legislative, and press and public scrutiny is the process by which political compromise is achieved and consensus built. The political process is viewed as investing the resulting legislation with a considerable degree of stability and support.

Viewed from the perspective of legal capacity, legislation has other advantages. At the heart of stranded cost securitization is the creation of a property right in the transition charges that serve as the basis for debt service. While it is clear that state legislatures are empowered by due process of law to create property rights, and to define and record how these rights are to be enjoyed, the ability of a state public utility commission to achieve the same end by

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regulatory compact may not be as certain.

Statutory status provides both constitutional and political protection against the risk that the creation and pledge of securitization property might be impaired by subsequent amendment. Historical precedent indicates that a legislature is unlikely to reverse itself once it has enacted a statute. Even if a political reversal were to occur, the Pennsylvania, Massachusetts and California statutes recognize that the bondholders possess certain constitutionally protected rights. Both statutes provide that if the right to recover stranded assets is compromised in any way, the bondholders are entitled to adequate compensation.

Nevertheless, in jurisdictions where public utility commissions may reasonably be viewed to have the capacity and authorization to order a recovery of stranded costs through a securitization-type procedure, and in which the commission has a stable history of consistent regulatory action, and in which the courts have paid regular deference to commission order, Standard & Poor's will consider regulatory-based recovery procedures case by case. However, any such consideration will necessarily involve a comparison by Standard & Poor's of the proposed regulating action and its enactment in contrast to rated, statute-based recovery plans.

Overview of Stranded Cost Securitization

Differences From Traditional Asset-Backed Transactions

Several key aspects differentiate the securitization of stranded costs from the securitization of more conventional asset types.

Cash Flow Receivables In a typical securitization, the originator of the assets transfers a pool of receivables to a trust and receives payment based on an agreed-upon value for those receivables. The key in this case is that the receivables have already been created. In contrast, stranded assets are not traditional receivables. Although the statutes create a present property right to future collection there is no initial cash flow backing the debt. Stranded assets represent the present right to the cash flow from receivables that will be created in the future when performance, in this case power generation and delivery, has been provided. But until this performance by the utility company takes place, the customer is not obligated to make any payments. Power generation is thus critical to assure full and timely payment to securityholders. As a result, there is a greater dependence on the utility as seller/servicer to do more than just collect payments on existing receivables and liquidate collateral to the extent needed.

Dependence on Servicer Servicer bankruptcy filings generally cause a change in servicer in most asset-backed transactions to prevent any disruptions in the required servicing and collections on the portfolio. Therefore, a substitute servicer must be ready and willing to take over all servicing responsibilities, if necessary. But unlike in typical securitizations, the transaction cannot fully rely on a substitute servicer. A utility does not just collect payments; it must continue to provide power. Because provision of electricity is fundamentally a necessary service, however, Chapter 7 liquidations are unlikely. In contrast, utilities will continue to operate in Chapter 11 reorganization, and thus, provide power and enforce collection from customers. Security is provided by the statutory mandate that collection obligations must be assumed by any successor corporation, including successors pursuant to reorganization, or otherwise. Due to the regulated nature of the industry a state-by-state review of successor servicing arrangements will be performed by Standard & Poor's.

True-up as Credit Support Credit support is entirely structured within the finances of the typical securitization. In contrast, in these transactions credit support has been provided by the statutory true-up mechanism. The parties must initially come up with a proposed amortization schedule. This schedule determines the tariff to be charged to recover

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the stranded costs, as well as the costs of the securitization itself. In setting this tariff schedule, the utility makes certain assumptions about charge-offs and sales over the following year or even decade. These assumptions will necessarily be inaccurate, especially as the date of forecast becomes increasingly remote. As a result, the stranded costs collected from customers could be less than those needed to repay the bonds. The true-up addresses this risk. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers. This effectively eliminates credit risk, except in the tail end of the transaction after the final true-up has occurred.

It should be understood that the true-up is not quite the same thing as an unlimited cash collateral account. Because the true-up will only be as good as collections in the following year, the amount of a current year's shortfall will not be fully recovered in the next year, due to charge-offs and forecast error occurring in that year. The amount will decrease over time, however, as successive true-ups are implemented. Where statutes do not place a limit on the tenor of the bonds and permit indefinite true-ups, the legal final maturity can simply be extended as a structural matter to gain the benefit of additional true-ups. This allows for as many true-ups as necessary to reduce the shortfalls that cannot be collected because they occur in what may have been originally contemplated as the final year of the transaction.

The true-up can make the amortization schedule for the bonds more predictable, unless dramatic consumption changes occur. This is because the true-up may adjust the amount payable to the trust by the customer base to the extent that there has been a shortfall or surplus in the prior period.

Perfection Mechanisms As stated above, the statutes provide for their own methods and location for filing and perfecting stranded assets. This may or may not result in the conclusion that stranded assets are new property interests not subject to UCC filing and priority rules, and thus are not subject to prior liens under the UCC.

Overcollateralization as Additional Credit Enhancement As mentioned earlier, the true-up mechanism will play an integral role in the transaction structure. The frequency of the true-up, for example, will influence the need for additional credit enhancement. Overcollateralization is the most likely form of credit support. Overcollateralization would cover the risks in the stub period following the final true-up, as well as make up for past shortfalls in collections that were never fully trued-up in the past.

Sale Accounting and FAS 125 Stranded cost securitizations do not possess sale status as an accounting matter under FAS 125. The Security Exchange Commission's Office of Chief Accountant has indicated that while the utilities may be able to sell the right to recover stranded costs as a legal matter, they will not be able to remove the assets (and associated debt) from their balance sheets under FAS 125. Nevertheless, as long as the transaction is structured as a true sale for legal purposes, Standard & Poor's will "back out" for analytical purposes nonrecourse debt and associated carrying costs from the utility's consolidated financial statements. While off-balance-sheet treatment would have enabled a more clear-cut analysis, Standard & Poor's will attempt to recognize the economic (as opposed to the accounting) reality.

Debt for Tax Treatment Any utility intending to securitize stranded costs will likely seek a private letter ruling from the IRS that states that the sale of the assets constitutes a "debt for tax transaction." In other words, the sale would not result in the immediate recognition of income. If the sale were deemed to provide immediate income, the utility would incur an immediate tax liability as well. This would destroy the economics of a securitization.

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The Rating Approach

Specific credit and legal risks that arise in securitizing stranded costs are addressed below. Standard & Poor's pursues a general rating methodology that attempts to stress in cash flows the ability of the true-up mechanism to ensure timely payment of interest and repayment of principal. In addition, it attempts to determine the number of true ups needed to meet these payments, that is, the structure's ability to meet its legal final maturity.

Credit Risks

Inaccuracy in Forecasting As mentioned earlier, the funds necessary to pay the stranded assets of the issuer are dependent on the tariff set by the commission and collected from the utility's customers. Tariff schedules are compiled for each customer class so that, taken together, the tariffs charged will amortize the stranded assets over the life of the securitization, while making timely interest payments. The tariff amounts themselves are based on estimates of cash flows to be collected from the customer base. The tariff amounts are thus determined based on such factors as the utility's forecast of population growth or decline, and seasonality in expected usage.

A shortfall in tariff collections can be caused by lower than expected usage due to:

Unanticipated customer migration (anticipated migration is included in the forecasting). Residential and small business customers are considered low risk in terms of customer migration. Large industrial customers, on the other hand, are considered a significant risk that requires additional stress to the cash flows (see Cash Flows). Additionally, as the term of transition bond issued exceeds the 6-8 years historically seen, technology driven customer migration increases significantly and begins to impact usage from commercial and small business customers.

Unanticipated weather conditions. Seasonal weather fluctuations are studied, and typically accounted for in setting the tariff charge.

Forecast error negatively impacts liquidity on the bonds and may "push out" the maturity of the bonds by requiring additional true-ups before the bonds can be paid out. To capture this risk, historical forecasting error is stressed at a certain multiple depending on the rating sought.

Where the tariff is recoverable from large industrial and commercial customers, Standard & Poor's will require data stratifying these customers by revenues generated. The cash flows will be additionally stressed to account for a potential loss in revenues caused by relocation of those customers with a high concentration risk in revenue generation for the utility.

Certain states have legislated rate caps on either the transaction charge for specific customer classes or on the total customer charge (i.e. through mandated rate reductions). Standard & Poor's will review the cash flow models to confirm that these rate caps are respected in stress scenarios.

Higher-Than-Expected Charge-Off Experience Like other forecasting variables, anticipated charge-offs are included in forecasting for purposes of setting the tariffs. Charge-offs may be higher than expected based on historical experience due to a variety of factors, including economic changes and unforeseen disasters. To account for this risk, charge-off history is stressed by the multiple relevant to the rating sought.

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Commingling by Aggregators The recent mandated unbundling of generation, transmission, and distribution charges has paved the way for alternative generation suppliers. The consumer may choose to purchase its generation services from an alternative supplier, while continuing to pay transmission and distribution (wires charge) to the utility. As discussed earlier, the tariff would be included in the wires charge, so that collection of the tariff itself would not be endangered by the existence of competition for generation services. However, commingling risk could exist as a result of potential billing arrangements for the utility's transmission and distribution services on the one hand, and the alternative energy provider's generation services on the other.

Generally, alternative energy service providers (retail electric providers; third-party servicers) may provide a consolidated bill for their generation services and the tariff owed to the utility. Where this is the case, the energy services provider is liable to pay the tariff regardless of whether it has received collections from the ultimate users. As a result, the securitization is exposed to commingling risk, and the resulting loss of commingled tariffs, in the event of the bankruptcy of an energy services provider.

This risk can be mitigated by certain restrictions on the length of time that an energy services provider may commingle funds before consolidated billing and service is terminated. If the energy services provider becomes delinquent, direct and consolidated billing may cease and service and separate billing to the end-user customer would be made up for the tariff. This means that the aggregator could commingle funds for a number of days before consolidated billing were terminated. To address this risk, Standard & Poor's stressed cash flow runs eliminate one month of collections per year at the utility's peak billing cycle.

This or other risks involving alternative energy providers may exist in other stranded cost securitizations. Standard & Poor's will assess these risks and the resulting necessary cash flow stresses on a case-by-case basis.

Estimate of Tariff Based on Collections Curve Generally, utilities are unable to allocate amounts received to various charges on the bill, so they were unable to calculate what percentage of collections constituted tariff collections. To address this problem, the utilities prepared forecasts of the percentages of amounts expected to be received during each of the following six months. These forecasts were based on collections curves developed periodically based on accounting studies and collections studies performed by the companies. For each monthly billing period, collections were estimated over six months based on the collections curve.

When the actual tariff remittances by customers are calculated (on the seventh month following each monthly billing period), either too much or too little may have been paid for that billing period. If the amount remitted has been less than the actual tariffs collected during that six-month period, the shortfall will be made up the following month out of the servicer's (the utility's) own funds. Thus, if the servicer is bankrupt (Standard & Poor's assumption), there is a risk the bondholders will lose that portion of the tariff. If the actual tariff amount has been less than the estimated tariff collections remitted to the trust, the servicer would be entitled to withhold the excess amount paid from the next month's remittances.

It is not clear whether this risk will be present in other securitizations. To date, the risk of lower-than-actual remittances has not been separately stressed in the cash flow runs. The one month of lost collections (see Commingling by Aggregators) has been sufficient to cover this risk. Standard & Poor's also has relied on data provided by the company showing relative lack of volatility in the collections curve.

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Higher Tariff An increase in tariff resulting from higher true-ups might become burdensome to consumers. This risk might have a spiraling effect, because greater charge-offs or customer migration or decreased usage might result, which in turn would result in the need for increased true-ups. Standard & Poor's will assess this risk by examining the highest per kWh tariff charge reached under the relevant stress scenarios. This risk increases as the term of the transaction increases to 10-15 years given greater technological/migration risk.

Cash Flows Two cash flow runs are generally required in rating stranded costs: a compounding forecast error run and an oscillating forecast error run, implementing the stress scenarios described below. These runs are created to test liquidity as well as the transaction's ability to meet the final maturity of each class of bonds in the transaction. They do so by creating scenarios where the true-up in the tariff amount (the reset of the tariff to reflect prior experience with actual collections and recover prior shortfalls in collections) continuously fails to reflect actual collections.

Compounding Forecast Error Run The compounding forecast error run assumes a compounding stressed error in forecasting resulting in a continual decline in actual tariff collections over what was forecast for that year. Assume, for example, that during year one, sales are 90% of the original sales forecast, that is, forecast error reflecting a multiple of the average forecast error for the customer class, where actual collections are less than expected collections.

At the end of year one, the tariff charge is recalculated assuming that year two customer sales will be what was experienced in year one, that is, 90% of the original expected forecast. Instead, year two sales are only 81% (90% of 90%) of the original sales forecast.

The sales decline is generally based on a multiple of the absolute value of the largest historical non-weather-normalized forecast variance by customer class. This compounding is assumed to continue from year to year over the life of the transaction.

Oscillating Forecast Error Run The oscillating forecast error run assumes a scenario where in one-year tariff collections exceed expectations, so that in the following year, the tariff is reset based on the prior year, only to experience a shortfall in actual collections. Assume for example that the appropriate stressed forecast error is 10%. During year one, sales are 90% (10% below) the original sales forecast. At the end of year one, the tariff is recalculated assuming that year two sales are also 90% of the original forecast. Instead, year two sales are 99% (110% of 90% level) of the original forecast. The tariff for the following year is reset assuming 99% of original forecast collections, only to receive 90% of originally forecast collections. This oscillation between 90% and 99% of original forecast is assumed to continue over the life of the transaction.

Legal Final Maturity The legal final maturity dates on stranded cost transactions are often set at up to two years beyond expected maturities. This additional period acknowledges the long-term nature of the liabilities being rated, and the corresponding possibility that fundamental changes in technology might take place that further stress the transaction in an unforeseen manner. One currently known possibility is that over time customers may increasingly switch to self-generation, which would enable them to cease paying the wires charge and thus, the tariff. Certain transactions have reduced this period by requiring more frequent (e.g. monthly) true-ups during the final year or two of the transaction.

Legal Risks

Reliance on Commission to Implement True-Up, and Potential Delay in Approving the True-Up Standard & Poor's believes that so long as the statute clearly specifies the maximum period before which the commission is compelled to implement the true-up, any shortfall in collections resulting from the delay can be sized and factored into the cash flow projections. Certain structures may permit the application of principal collections as liquidity for any interest payments due to noteholders during any true-up delay. In the absence of such features, adequate provision for liquidity and additional credit support should be demonstrated to Standard & Poor's.

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Adequate Provision Law permits alteration or limitation of right to transition property and right to collect tariffs if "adequate provision" is made to the bondholders. Although there has been no conclusive demonstration as to what constitutes "adequate provision," and how such alteration or limitation would affect timely interest and principal payments on the bonds, Standard & Poor's, in rated transactions, has received legal assurances that any such alteration would be constitutionally prohibited were it substantially to impair the security for the bonds. While such assurances do not really define adequate provision, Standard & Poor's believes, in practice, that adequate provision should prove to be the functional equivalent of the pledged transition property.

Stranded Assets to Aid Industry Restructuring

Securitization of stranded assets provides an efficient method electric utilities can use to quickly free themselves from the high cost of stranded assets that prevents them from becoming players in the emerging competitive retail generation market. At the same time, the statutory true-up mechanism provides strong credit support that has withstood 'AAA' stress criteria applied by Standard & Poor's.

Related Criteria

- Post-Default Ratings Methodology: When Does S&P Global Ratings Raise A Rating From 'D' Or 'SD'?, March 23, 2015
- U.S. Public Finance: Electric And Gas Utility Ratings, Dec. 16, 2014
- Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings, Oct. 24, 2013
- Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
- Global Investment Criteria for Temporary Investments in Transaction Accounts, May 31, 2012
- Principles Of Credit Ratings, Feb. 16, 2011
- Methodology: Credit Stability Criteria, May 3, 2010
- Use of CreditWatch And Outlooks, Sept. 14, 2009
- U.S. Legal Criteria For "Recycled" Special-Purpose Entities, Sept. 19, 2002

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A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.

PART II
FAIR ADJUSTMENT

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

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Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

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Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

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i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the

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applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

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Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

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2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

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1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

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FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

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(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

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PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an

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adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

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Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

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2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

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Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

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Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

Non-application, Financial Administration Act, s. 28[7]

37xx. Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[7] Note - see s. 51 of the Electricity Act, 1998

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[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

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1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

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[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From: Hanslep, Malle (MOF)
To: Ken Kandeepan; Mike Manning; Ronald Kwan
Cc: Tobias P. Whitfield (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee
Date: Friday, April 21, 2017 2:42:00 PM
Attachments: LAWS OF THE STATE OF NEW YORK - CHAPTER 173 OF 2013.docx
summary of securitization provisions in LIPA Reform Act.docx
Summary of Duke Energy Securitization.docx
Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf
Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf
Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf
Moody"s - Duke Energy Florida Project Finance, LLC Series A Bonds.pdf
S&P - List of S&P Rated Stranded Cost Transactions (2013).pdf
S&P - Securitizing Stranded Costs_S&P Criteria (2001).pdf
Fair Hydro Plan Act (April 20 2017) Consultation v3.docx

From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:38 PM
To: Mayman, Gadi (OFA); Strathy, Anna (OFA)
Cc: Whitfield, Tobias P. (MOF); Waterston, Michael (MOF)
Subject: FW: Guarantee

Some more information sent by Carolyn.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.
Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.
This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.
Happy to answer your questions or walk you through the proposed bill.
Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,
Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.
We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.
Thanks!
Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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ASSEMBLY BILL #**A8073** SAME AS SENATE BILL #**S5844**

LAWS OF NEW YORK, 2013

CHAPTER 173

AN ACT to amend the public service law, the public authorities law, the executive law and the education law, in relation to the powers and duties of the department of public service and the Long Island power authority; to repeal subdivision (u) of section 1020-f of the public authorities law relating to general powers of the authority; and providing for the repeal of certain provisions upon expiration thereof (Part A); and in relation to the issuance of securitized restructuring bonds to refinance the outstanding debt of the Long Island power authority (Part B)

Became a law July 29, 2013, with the approval of the Governor.
Passed by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. This act enacts into law major components of legislation relating to issues deemed necessary by the state. Each component is wholly contained within a Part identified as Parts A through B. The effective date for each particular provision contained within such Part is set forth in the last section of such Part. Any provision in any section contained within a Part, including the effective date of the Part, which makes reference to a section "of this act", when used in connection with a particular component, shall be deemed to mean and refer to the corresponding section of the Part in which it is found.

Section three of this act sets forth the general effective date of this act.

PART A

Section 1. Section 3 of the public service law, as amended by chapter 8 of the laws of 2012, is amended and a new section 3-b is added to read as follows:

§ 3. Department of public service. [~~1.~~] There shall be in the state government a department of public service. The chairman of the public service commission shall be the chief executive officer of the department. He or she shall appoint and shall have the power to remove, subject to the provisions of the civil service law, all officers, clerks, inspectors, experts and employees of the department, and to approve all contracts for special service. The chairman shall designate one of the commissioners in the department or an officer of the department to act as deputy chairman during the absence or disability of the chairman and during such times such deputy chairman shall possess all the powers of the chairman as chief executive officer of the department.

[~~2. The department shall, upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of said authority pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or~~

EXPLANATION--Matter in ***italics*** is new; matter in brackets [-] is old law

to be omitted.

~~CHAP. 173 2~~

~~by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the Long Island power authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department according to such terms as the department may determine are necessary and reasonable.~~]

§ 3-b. Long Island office of the department.

1. There is hereby established in the department an office to review and make recommendations with respect to the operations and terms and conditions of service of, and rates and budgets established by, the Long Island power authority and/or its service provider.

2. Definitions. As used or referred to in this section:

(a) "Authority" means the Long Island power authority.

(b) "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract. However, the service provider and any affiliate of the service provider with whom the authority or service provider contracts to provide services associated with the authority's electric transmission and distribution system shall not be considered an electric corporation under this chapter.

(c) "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the Long Island power authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

3. General powers. In undertaking the requirements of this section, subject to subdivisions (u) and (bb) through (hh) of section one thousand twenty-f of the public authorities law, the department shall be empowered and authorized to:

(a) Review and make recommendations to the board of the Long Island power authority with respect to the rates and charges, including charges related to energy efficiency and renewable energy programs, to be established by the authority and become applicable on or after January first, two thousand sixteen pursuant to subdivision (u) of section one thousand twenty-f of the public authorities law.

(i) The purpose of such review is to make recommendations designed to ensure that the authority and the service provider provide safe and adequate transmission and distribution service at rates set at the lowest level consistent with sound fiscal operating practices.

(ii) The department's recommendations shall be designed to be consistent with ensuring that the revenue requirements related to such rate review are sufficient to satisfy the authority's obligations with respect to its bonds, notes and all other contracts.

(iii) In the context of such review, the department may not make any recommendation that would modify the compensation or fee structure included within the operations services agreement.

(iv) In undertaking such review and in making recommendations related to the proposed rates and charges, the department shall establish standards,

policies and procedures that, at a minimum, provide for public statement and evidentiary hearings and participation of intervenors and other parties, and ensure that any final recommendations related to the proposed rates and charges are provided to the authority within two hundred forty days of the filing with the department of such plan.

(v) The parties to any such rate review proceeding shall include, but not be limited to, department staff, the authority, the service provider and, to the extent it deems necessary or appropriate, the utility intervention unit.

(b) Review the annual capital expenditures proposed by the service provider and recommend such improvement in the manufacture, conveying, transportation, distribution or supply of electricity, or in the methods employed by the service provider as in the department's judgment allows for safe and adequate service.

(c) Annually review the emergency response plan of the authority and the service provider in accordance with the following requirements:

(i) Examine and determine whether the emergency response plan is consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of this chapter and any regulations or orders promulgated thereto, and to recommend amendments of same; and

(ii) Review and make recommendations to the authority with respect to the performance of the service provider in restoring service or otherwise meeting the requirements of the emergency response plan during an emergency event, defined for purposes of this section as an event where widespread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and its service provider, including making determinations with respect to whether the service provider is reasonably able to implement the emergency response plan, whether the length of any outages related to such emergency were materially longer than they would otherwise have been because the service provider failed to reasonably implement the emergency response plan, the reasonableness of costs associated with such emergency response, the costs, if any, that were unreasonably and imprudently incurred by the service provider, and whether the service provider would be liable for any such costs pursuant to the terms and conditions of the operations services agreement.

(d) Upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of the authority and service provider pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department

according to such terms as the department may determine are necessary and reasonable.

(e) Accept, investigate, mediate to resolve and make recommendations to the Long Island power authority and/or the service provider regarding the resolution of complaints from consumers in the authority's service

territory relating to, among other things, the provision of electric service provided by the service provider and/or the authority.

(f) Review the net metering program implemented under subdivision (h) of section one thousand twenty-g of the public authorities law and make recommendations designed to ensure consistency with the requirements of sections sixty-six-j and sixty-six-l of this chapter, and any regulations and orders adopted thereto.

(g) Review and make recommendations with respect to any proposed plan submitted by the Long Island power authority and/or the service provider related to implementation of energy efficiency measures, distributed generation or advanced grid technology programs having the purpose of providing customers with tools to more efficiently and effectively manage their energy usage and utility bills, and improving system reliability and power quality.

(h) Review the data, information and reports submitted pursuant to subdivision (hh) of section one thousand twenty-f of the public authorities law and other pertinent information related to the metrics in the operations services agreement, the Long Island power authority's evaluation of such data, information and reports, and make recommendations to the authority with respect to the service provider's annual incentive based compensation within thirty days of receipt of such evaluation and information.

4. Review and inspection. To undertake the requirements of subdivision two of this section, the department shall be authorized to inspect all premises and facilities owned or operated by the authority and the service provider, review all books and records of the authority and the service provider, interview all appropriate personnel, and require annual reporting consistent with the requirements of subdivision six of section sixty-six of this chapter and any regulations and orders adopted thereto; provided, however, that this authority shall not extend to affiliates of the service provider.

§ 2. Subdivision 2 and paragraph (b) of subdivision 6 of section 18-a of the public service law, subdivision 2 as amended by section 2 of part NN of chapter 59 of the laws of 2009 and paragraph (b) of subdivision 6 as amended by section 1 of part BB of chapter 59 of the laws of 2013, are amended and a new subdivision 1-a is added to read as follows:

1-a. All costs and expenses of the department related to the department's responsibilities under section three-b of this chapter shall be paid pursuant to appropriation on the certification of the chairman of the department and upon the audit and warrant of the comptroller. For the state fiscal year beginning on April first, two thousand fourteen and each state fiscal year thereafter, payments are to be made from all moneys collected from the Long Island power authority pursuant to this section. The total of such costs and expenses shall be assessed on such authority in the manner provided in subdivisions two, three and four of this section.

2. (a) The chairman of the department shall estimate prior to the start of each state fiscal year the total costs and expenses, including the compensation and expenses of the commission and the department, their officers, agents and employees, and including the cost of retirement contributions, social security, health and dental insurance, survivor's benefits, workers' compensation, unemployment insurance and other fringe

benefits required to be paid by the state for the personnel of the commission and the department, and including all other items of maintenance and operation expenses, and all other direct and indirect costs. Based on such estimates, the chairman shall determine the amount

to be paid by each assessed public utility company **and the Long Island power authority** and a bill shall be rendered to each such public utility company **and authority**.

(b) The bill for each public utility company **and the Long Island power authority** shall be rendered on or before February first preceding each fiscal year, and shall be for the amount equal to the product of the aforesaid estimated costs and expenses of conducting the department's and commission's total operations during the fiscal year for which billing is being made multiplied by the proportion which compares:

(1) the gross operating revenues, over and above five hundred thousand dollars, for that utility company **or the authority** derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman, to:

(2) the total of the gross operating revenues, derived from intrastate utility operations for all utility companies **and the authority** in the state which revenues are included under subparagraph one of this paragraph.

For the purposes of calculating the commodity cost component of its gross operating revenue, where the utility delivers to end-use customers electricity and/or natural gas commodities that are sold to such customers by a third party, such utility shall include in its revenues an estimate of the sales revenue for the electric and/or natural gas commodities that it delivers, including all such commodities sold to end-use customers by third parties, in such manner as to assure that all end-use delivery customers, regardless of the entity from which they purchase their electric and/or natural gas commodities, bear a fair and proportionate share of the assessment imposed herein, as the commission may determine.

(c) The minimum assessment for any utility company**, as well as the Long Island power authority,** whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

(d) The amount of such bill for fiscal years beginning on or after April first, nineteen hundred eighty-three so rendered shall be paid by such public utility company **and such authority** to the department on or before April first; provided, however, that [~~a~~] **any such** utility company **or such authority** may elect to make partial payments for such costs and expenses on March tenth of the preceding fiscal year and on September tenth of such fiscal year. Each such partial payment shall be a sum equal to fifty percentum of the estimate of costs and expenses to be assessed against such utility company **or authority** under the provisions of this subdivision and shall not be less than two hundred dollars.

(e) During the course of any state fiscal year, the chairman may increase or decrease the estimate of costs and expenses. In such case, revised bills shall be sent to each public utility company **and such authority**, and such increase or decrease shall be equally apportioned against the remaining payments for such fiscal year.

(f) On or before October tenth of each year, the chairman shall compute the actual costs and expenses of the department and the commission and adjustments or other corrections as needed for the preceding state fiscal year and, after deducting the amounts recovered pursuant to subdivisions three and four of this section, shall, on or before October twentieth, send to each public utility company **and/or the authority** affected thereby a

statement setting forth the amount due and payable by, or the amount standing to the credit of, such public utility company **and/or the authority**. Any amount owing by any public utility company

and/or the authority shall be paid not later than thirty days following the date such statement is received. Any such amount standing to the credit of any public utility company shall be refunded by the commission or, at the option of such utility company, shall be applied as a credit against any succeeding payment due.

(g) The total amount which may be charged to any public utility company **and the Long Island power authority** under authority of this subdivision for any state fiscal year shall not exceed one per centum of such public utility company's **or authority's** gross operating revenues derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman; provided, however, that no corporation or person that is subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the general assessment provided for under this subdivision.

Notwithstanding the provisions of subdivision one of this section, for telephone corporations as defined in subdivision seventeen of section two of this article, the total amount which may be charged such corporations for department expenses under the authority of subdivision one of this section for any state fiscal year shall not exceed one-third of one percentum of such corporation's gross operating revenue, over and above five hundred thousand dollars, derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman.

(h) On-bill recovery charges billed pursuant to section sixty-six-m of this chapter shall be excluded from any determination of an entity's gross operating revenues derived from intrastate utility operations for purposes of this section.

(b) The temporary state energy and utility service conservation assessment shall be based upon the following percentum of the utility entity's gross operating revenues derived from intrastate utility operations in the last preceding calendar year, minus the amount, if any, that such utility entity is assessed pursuant to subdivisions one and two of this section for the corresponding state fiscal year period: (1) two percentum for the state fiscal year beginning April first, two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) one and three-quarters percentum for the state fiscal year beginning April first, two thousand fifteen; and (3) one and one-half percentum for the state fiscal year beginning April first, two thousand sixteen. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, utility entities shall make a payment equal to one-half of the assessment paid by such entities pursuant to this paragraph for the state fiscal year beginning on April first, two thousand sixteen. With respect to the Long Island power authority, the temporary state energy and utility service conservation assessment shall be based upon the following percentum of such authority's gross operating revenues derived from intrastate utility operations in the last preceding calendar year**, minus the amount, if any, that such authority is assessed pursuant to subdivisions one-a and two of this section for the corresponding state fiscal year period**: (1) one percentum for the state fiscal year beginning April first,

two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) three- quarters of one percentum for the state fiscal year beginning April

first, two thousand fifteen; and (3) one-half percentum for the state fiscal year beginning April first, two thousand sixteen**; provided, however, that should the amount assessed by the department for costs and expenses pursuant to such subdivisions equal or exceed such authority's temporary state energy and utility service conservation assessment for a particular fiscal year, the amount to be paid under this subdivision by such authority shall be zero**. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, the Long Island power authority shall make a payment equal to one-half of the assessment it paid for the state fiscal year beginning on April first, two thousand sixteen. No corporation or person subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the temporary state energy and utility service conservation assessment provided for under this subdivision. Utility entities whose gross operating revenues from intrastate utility operations are five hundred thousand dollars or less in the preceding calendar year shall not be subject to the temporary state energy and utility service conservation assessment. The minimum temporary state energy and utility service conservation assessment to be billed to any utility entity whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

§ 3. Section 1020-b of the public authorities law is amended by adding two new subdivisions 23 and 24 to read as follows:

23. "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract.

24. "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

§ 4. Section 1020-d of the public authorities law, as added by chapter 506 of the laws of 1995, is amended to read as follows:

§ 1020-d. [~~Trustees~~] **Board of trustees**.

1. [~~The~~] **Starting on January first, two thousand fourteen, the board of the** authority shall **be constituted and** consist of [~~fifteen~~] **nine** trustees all of whom shall be residents of the service area, [~~nine~~] **five** of whom shall be appointed by the governor, one of whom the governor shall designate as [~~chairman~~] **chair**, and serve at his **or her** pleasure, [~~three~~] **two** of whom shall be appointed by the temporary president of the senate, and [~~three~~] **two** of whom shall be appointed by the speaker of the assembly. [~~Two~~] **One** of the governor's appointees shall serve an initial term of [~~one year~~] **two years**; [~~two~~] **one** of the governor's appointees shall serve an initial term of [~~two~~] **three** years; [~~two~~] **and three** of the governor's appointees shall serve an initial term of [~~three~~] **four** years[~~; and three of the governor's appointees shall serve an initial term of four years~~]. [~~Two~~] **One** of the appointees of the temporary president of the senate and [~~two~~] **one** of the appointees of the speaker of the assembly shall serve initial terms of [~~one year~~] **two years**;

and one appointee of the temporary president of the senate and one appointee of the speaker of the assembly shall serve initial terms of [~~two~~] **three** years. Thereafter, all terms

shall be for a period of four years. In the event of a vacancy occurring in the office of trustee by death, resignation or otherwise, the respective appointing officer shall appoint a successor who shall hold office for the unexpired portion of the term.

2. No trustee shall receive a salary, but each shall be entitled to reimbursement for reasonable expenses in the performance of duties assigned hereunder.

3. Notwithstanding the provisions of any other law, no trustee, officer or employee of the state, any state agency or municipality appointed a trustee shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of a trusteeship on the authority, his or her service thereon or his or her employment therewith.

4. All trustees appointed under this section shall have relevant utility, corporate board or financial experience.

§ 5. On or before December 1, 2013 the governor, the temporary president of the senate and the speaker of the assembly shall choose and announce their appointments to the board of the Long Island power authority to be made pursuant to section 1020-d of the public authorities law, as amended by section four of this act, giving due consideration to continuity of business. The board of trustees of the Long Island power authority in existence on December 31, 2013, shall be abolished on such date and be constituted on January 1, 2014 pursuant to section 1020-d of the public authorities law, as amended by section four of this act.

§ 6. Subdivision (u) of section 1020-f of the public authorities law is REPEALED.

§ 7. Subdivisions (c) and (bb) of section 1020-f of the public authorities law, subdivision (c) as amended by chapter 506 of the laws of 2009 and subdivision (bb) as added by chapter 8 of the laws of 2012, are amended and seven new subdivisions (u), (cc), (dd), (ee), (ff), (gg) and (hh) are added to read as follows:

(c) To appoint officers, agents and employees, without regard to any personnel or civil service law, rule or regulation of the state and in accordance with guidelines adopted by the authority, prescribe their duties and qualifications and fix and pay their compensation [~~**, provided, however, that the appointment of the chief executive officer shall be subject to confirmation by the senate in accordance with section twenty-eight hundred fifty-two of this chapter;**~~]**. By January first, two thousand fourteen, the authority, through its governance committee, shall amend such guidelines to require that staffing at the authority is kept at levels only necessary to ensure that the authority is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and oversee the activities of the service provider**;

(u) Rate plans. Subject to subdivision six of section one thousand twenty-k of this title to fix rates and charges for the furnishing or rendition of gas or electric power or of any related service at the lowest level consistent with sound fiscal and operating practices of the authority and which provide for safe and adequate service. In implementing this power:

1. The authority and the service provider shall, on or before February first, two thousand fifteen, submit for review to the department of public service a three-year rate proposal for rates and charges to take effect on or after January first, two thousand sixteen.

2. The authority and the service provider shall thereafter submit for review to the department of public service any rate proposal that would increase the rates and charges and thus increase the aggregate revenues of the authority by more than two and one-half percent to be measured on an annual basis; provided, however, that the authority may place such rates and charges into effect on an interim basis, subject to prospective rate adjustment; provided, further, that a final rate plan issued by the authority that would not so increase such rates and charges shall not be subject to the requirements of paragraph four of this subdivision and shall be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The authority and/or the service provider may otherwise submit for review to such department any rate proposal irrespective of its effect on revenues.

3. The authority shall not fix any final rates and charges proposed that would not be subject to review by the department of public service pursuant to paragraphs one and two of this subdivision until after holding public hearings thereon upon reasonable public notice, with at least one such hearing to be held each in the county of Suffolk and the county of Nassau.

4. Any recommendations associated with a rate proposal submitted pursuant to paragraphs one and two of this subdivision shall be provided by the department of public service to the board of the authority immediately upon their finalization by the department. Unless the board of the authority makes a preliminary determination in its discretion that any particular recommendation is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligations, or the provision of safe and adequate service, the board shall implement such recommendations as part of its final rate plan and such final determination shall be deemed to satisfy the requirements of this subdivision and be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The board shall make any such preliminary determination of inconsistency within thirty days of receipt of such recommendations, with notice and the basis of such determination being provided to the department of public service, and contemporaneously posted on the websites of the authority and its service provider. The board shall thereafter, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency.

At such hearing, the department of public service shall present the basis for its recommendations, the board shall present the basis for its determination of inconsistency and the service provider may present its position. The authority and the service provider may, during the time period before such public hearing reach agreement with the department on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementation with respect to any such recommendations. The authority's final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(bb) Comprehensive and regular management and operations audits.

1. The authority **and the service provider** shall cooperate in the undertaking and completion of a regular and comprehensive management and operations audit conducted pursuant to the requirements of this subdivision and [~~subdivision two of section three~~] **paragraph (d) of subdivision three of section three-b** of the public service law. Such audit shall review and evaluate the [~~authority's~~] overall operations and management

of the authority and service provider, including [~~the authority's~~] such operations and management in the context of [~~its~~] the authority's duty to set rates at the lowest level consistent with standards and procedures provided in subdivision (u) of this section, and include, but not be limited to: (i) the [~~authority's~~] service provider's construction and capital program planning in relation to the needs of [~~its~~] customers for reliable service; (ii) the overall efficiency of the authority's and service provider's operations; (iii) the manner in which the authority is meeting its debt service obligations; (iv) the authority's Fuel and Purchased Power Cost Adjustment clause and recovery of costs associated with such clause; (v) the authority's and service provider's annual budgeting procedures and process; (vi) the application, if any, of the performance metrics designated in the operations services agreement and the accuracy of the data relied upon with respect to such application; and [~~(vi)~~] (vii) the authority's compliance with debt covenants.

2. The department of public service shall notify the authority that said department is in the process of initiating a comprehensive management and operations audit as described in paragraph one of this subdivision in a manner that ensures the timeliness of such audit, and in accordance with the following timeframe: the first comprehensive management and operations audit shall be initiated as of the effective date of [~~this subdivision~~] chapter eight of the laws of two thousand twelve and undertaken in a manner and to an extent that is practicable in the context of the authority's transition to a new management service structure; the second comprehensive management and operations audit shall be initiated no later than December fifteenth, two thousand [~~fifteen~~] sixteen; and all additional comprehensive management and operations audits shall be initiated at least once every five years thereafter.

Within a reasonable time after such notification to the authority, said department or the independent auditor retained by the authority to undertake such audit shall hold public statement hearings, with proper notice, in both Nassau and Suffolk counties for the purpose of receiving both oral and written comments from the public on matters related to such audit as described in paragraph one of this subdivision.

3. Each such audit shall be completed within eighteen months of initiation absent an extension for good cause shown by the department of public service or the independent auditor under contract with the authority with notice of such extension to the governor, the temporary president of the senate, the speaker of the assembly, and the chairs of the authority and the department of public service. Such audit shall be provided to the board of the authority immediately upon its completion.

The department of public service shall provide notice of completion of such audit to the governor, the temporary president of the senate, the speaker of the assembly, and the minority leaders of the senate and assembly, and the authority, upon receipt of such audit, shall post a copy of such audit, including findings and recommendations, on its website and the website of the service provider. Unless the board of the authority makes a preliminary determination that any particular finding or recommendation contained in such audit is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligation, or the provision for safe and adequate service, the board shall implement or cause its service provider to implement such findings and recommendations in accordance with the timeframe specified under such audit.

4. The board of the authority shall make any preliminary determination of inconsistency with respect to any such finding or recommendation

within thirty days of receipt of the audit, with notice and the basis of such determination being provided to the department of public service.

Such notice and basis shall be posted contemporaneously on the authority's website **and the website of the service provider** and the board shall, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency. At such hearing the department of public service or the independent auditor responsible for undertaking such audit shall present the basis for its findings and recommendations and the board shall present the basis for its determination of inconsistency **and the service provider may present is position**. The authority**, service provider** and auditor may during the time period prior to such public hearing reach agreement on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementations with respect to any such findings and/or recommendations. The [~~**board's**~~] **authority's** final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(cc) To prepare an emergency response plan pursuant to this subdivision. 1. The service provider shall, in consultation with the authority, prepare and maintain an emergency response plan (i) to assure the reasonably prompt restoration of service in the case of an emergency event, defined for purposes of this subdivision as an event where wide-spread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and the service provider, (ii) consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of the public service law and any regulations and orders adopted thereto, and (iii) establishing the separate responsibilities of the authority and service provider.

2. On or before February third, two thousand fourteen, the authority and service provider shall submit an emergency response plan to the department of public service for review. Contemporaneously with such submission, the authority shall provide notice of such proposed plan to the secretary of state for publication in the state register, the authority and service provider each shall post such plan on their websites and otherwise make such plan available for review in-person, and afford members of the public an opportunity to submit written comments and oral comments pursuant to at least one hearing to be held each in the county of Suffolk and the county of Nassau. Such written comments must be submitted by March fourteenth, two thousand fourteen.

The authority and service provider shall provide a copy of all written comments they receive and a transcript of such public hearings to the department of public service for its consideration in reviewing the emergency response plan. The department shall provide any recommendations to the authority and service provider with respect to such plan on or before April fifteenth, two thousand fourteen. Such plan must be made final by June second, two thousand fourteen. For each year thereafter, the service provider shall submit an emergency response plan to the department of public service, and such department shall provide its recommendations, in accordance with a schedule to be established by such department and that is consistent with the schedule associated with such department's review of similar such plans provided by electric corporations pursuant to subdivision twenty-one of section sixty-six of the public service law.

3. By June second, two thousand fourteen, and by June first annually thereafter, the authority and service provider shall jointly certify to the department of homeland security and emergency services that the emergency response plan ensures, to the greatest extent feasible, the timely and safe restoration of energy services after an emergency consistent with the requirements of paragraph (a) of subdivision twenty-one of the public service law and the department's recommendations. The filing of such emergency response plan shall also include a copy of all written mutual assistance agreements among utilities. The authority and service provider shall file with the county executives of Nassau and Suffolk county and the mayor of the city of New York the most recent version of the emergency response plan, and make sure that such amended versions are timely filed.

4. Starting in calendar year two thousand fourteen, the service provider annually shall undertake at least one drill to implement procedures to practice its emergency response plan. The service provider shall notify and allow participation in such drill of all appropriate municipal emergency responders and officials.

5. If, during an emergency event, electric service is not restored in three days, the service provider shall within sixty days from the date of full restoration file with the department a report constituting a review of all aspects of the preparation and system restoration performance during the event, and shall thereafter take into consideration any recommendations made by the department associated with such review.

(dd) On or before January first, two thousand fifteen, and by January first of each calendar year thereafter, to submit for review to the department of public service a report detailing the service provider's planned capital expenditures.

(ee) On or before July first, two thousand fourteen, and annually thereafter, to submit for review to the department of public service any proposed plan related to implementing energy efficiency measures, distributed generation or advanced grid technology programs for the purpose provided pursuant to paragraph (g) of subdivision three of section three-b of the public service law.

(ff) To assist and cooperate with the department of public service with respect to any review undertaken pursuant to section three-b of the public service law, including providing the department with reasonable access to all facilities and premises owned or operated by the authority or its service provider, allowing review of all books and records of the authority and its service provider, providing copies of requested documents, allowing interviews of all appropriate personnel, and responding in a reasonable and timely manner to any inquiries or reporting requests made by the department; provided, however, that the obligations set forth in this subdivision shall not extend to affiliates of the service provider.

(gg) Renewable generation and energy efficiency programs. 1. The authority in coordination with the service provider, the power authority of the state of New York and the New York state energy research and development authority shall, to the extent the authority's rates are sufficient to provide safe and adequate transmission and distribution service, and the measures herein, undertake actions to design and administer renewable energy and energy efficiency measures in the service area, with the goal of continuing and expanding such measures that cost-effectively reduce system-wide peak demand, minimize long-term fuel price risk to rate payers, lower emissions, improve environmental quality, and seek to meet New York state climate change and environmental

goals. Such actions shall also include implementation of any renewable energy competitive procurement or feed-in-tariff programs that were approved by the authority as of the effective date of the chapter of the laws of two thousand thirteen which added this subdivision.

2. The service provider shall consider, consistent with maintaining system reliability, renewable generation and energy efficiency program results and options in establishing capital plans.

(hh) Starting in calendar year two thousand fifteen, the authority and the service provider shall submit to the department of public service for review, any and all data, information and reports which set forth the service provider's actual performance related to the metrics in the operations services agreement, including the authority's evaluation thereof, no less than forty-five days prior to the authority's determination of the service provider's annual incentive compensation.

§ 8. Section 1020-q of the public authorities law, as added by chapter 517 of the laws of 1986 and subdivision 2 as amended by section 19 of part Y of chapter 63 of the laws of 2000, is amended to read as follows:

§ 1020-q. Payments in lieu of taxes. 1. Each year after property theretofore owned by LILCO is acquired by the authority by any means authorized by this title and, as a consequence, is removed from the tax rolls, the authority shall make payments in lieu of taxes to municipalities and school districts equal to the taxes and assessments which would have been received from year to year by each such jurisdiction if such acquisition had not occurred, [~~except for such taxing jurisdictions which tax the Shoreham plant,in which case the in lieu of tax payments shall in the first year after the acquisition be equal to one hundred percent of the taxes and assessments which would have been received by such taxing jurisdictions. In each succeeding year such in lieu of tax payments shall be decreased by ten percent until such time as such payments equal taxes and assessments which would have been levied on such plant in a nonoperative state~~] provided, however, that for the calendar year starting on January first, two thousand fifteen, and for each calendar year thereafter, such payments in lieu of taxes shall not exceed the in lieu of tax payments made to such municipalities and school districts in the immediately preceding year by more than two percent.

2. The authority shall also make payments in lieu of taxes for those taxes which would otherwise be imposed [~~upon LILCO, if LILCO were to continue in operation,~~] pursuant to sections one hundred eighty-six-a and one hundred eighty-six-c of the tax law, and to former [~~sections one hundred eighty-six and~~] section one hundred eighty-six-b of the tax law as such [~~sections one hundred eighty-six and one hundred eighty-six-b were~~] section was in effect on December thirty-first, nineteen hundred ninety-nine, [~~paragraph (b) of subdivision four of section one hundred seventy-four of the navigation law,~~] and any taxes imposed by a city pursuant to the authorization granted by section twenty-b of the general city law.

3. No municipality or governmental subdivision, including a school district or special district, shall be liable to the authority or any other entity for a refund of property taxes originally assessed against the Shoreham plant. Any judicial determination that the Shoreham plant assessment was excessive, unequal or unlawful for any of the years from nineteen hundred seventy-six to the effective date of this title shall not result in a refund by any taxing jurisdiction of taxes previously paid by LILCO pursuant to such Shoreham plant assessment. The authority shall discontinue and abandon all proceedings, brought by its predecessor

in interest, which seek the repayment of all or part of the taxes assessed against the Shoreham plant.

§ 9. Subdivision 1 of section 1020-s of the public authorities law, as amended by chapter 388 of the laws of 2011, is amended to read as follows:

1. The rates, services and practices relating to the electricity generated by facilities owned or operated by the authority shall not be subject to the provisions of the public service law or to regulation by, or the jurisdiction of, the public service commission, except to the extent (a) article seven of the public service law applies to the siting and operation of a major utility transmission facility as defined there-in, (b) article ten of such law applies to the siting of a generating facility as defined therein, [~~and~~] (c) section eighteen-a of such law provides for assessment for certain costs, property or operations**, and (d) to the extent that the department of public service reviews and makes recommendations with respect to the operations and provision of services of, and rates and budgets established by, the authority pursuant to section three-b of such law**.

§ 10. Section 1020-w of the public authorities law, as added by chapter 517 of the laws of 1986, is amended to read as follows:

§ 1020-w. Audit and annual reports. The accounts of the authority shall be subject to the supervision of the state comptroller and an annual audit shall be performed by an independent certified accountant selected by the [~~state division of the budget~~] **authority, upon recommendation of its finance and audit committee**. The authority shall submit annually to the governor, the state comptroller, the temporary president of the senate, the speaker of the assembly and the county executives and governing bodies of the counties of Suffolk and Nassau, a detailed report pursuant to the provisions of section two thousand eight hundred of [~~title one of article nine of~~] this chapter, which report shall be verified by the chairman of the authority. The authority shall comply with the provisions of sections two thousand eight hundred one, two thousand eight hundred two and two thousand eight hundred three of [~~title one of article nine of~~] this chapter.

§ 11. Section 1020-cc of the public authorities law, as amended by chapter 413 of the laws of 2011, is amended to read as follows:

§ 1020-cc. Authority subject to certain provisions contained in the state finance law, the public service law, the social services law and the general municipal law.

1. All contracts of the authority shall be subject to the provisions of the state finance law relating to contracts made by the state. The authority shall also establish rules and regulations with respect to providing to its residential gas, electric and steam utility customers those rights and protections provided in article two and sections one hundred seventeen and one hundred eighteen of the public service law and section one hundred thirty-one-s of the social services law. The authority shall conform to any safety standards regarding manual lockable disconnect switches for solar electric generating equipment established by the public service commission pursuant to subparagraph (ii) of paragraph (a) of subdivision five and subparagraph (ii) of paragraph (a) of subdivision five-a of section sixty-six-j of the public service law. The authority shall let contracts for construction or purchase of supplies, materials, or equipment pursuant to section one hundred three and paragraph (e) of subdivision four of section one hundred twenty-w of the general municipal law.

2. The authority and service provider shall provide to the state comptroller on March thirty-first and September thirtieth of each year a

report documenting each contract in excess of two hundred fifty thousand dollars per year entered into with a third party and related to management

and operation services associated with the authority's electric transmission and distribution system, including the name of the third party, the contract term and a description of services or goods to be procured, and post such report on each of their websites. All contracts entered into between the service provider and third parties are not subject to the requirements of subdivision one of this section.

§ 12. Paragraph (b) of subdivision 4 of section 94-a of the executive law, as amended by chapter 8 of the laws of 2012, is amended to read as follows:

(b) The utility intervention unit shall have the power and duty to:

(i) on behalf of the secretary, initiate, intervene in, or participate in any proceedings before the public service commission **or the department of public service**, to the extent authorized by sections **three-b,** twenty-four-a, seventy-one, eighty-four or ninety-six of the public service law or any other applicable provision of law, where he or she deems such initiation, intervention or participation to be necessary or appropriate;

(ii) represent the interests of consumers of the state before federal, state and local administrative and regulatory agencies engaged in the regulation of energy services; [~~and~~]

(iii) accept and investigate complaints of any kind from Long Island power authority consumers, attempt to mediate such complaints where appropriate directly with such authority and refer complaints to the appropriate state or local agency authorized by law to take action with respect to such complaints[~~.~~]**; and**

(iv) hold regular forums in each of the service territories of the combination gas and electric corporations, as defined under section two of the public service law, and the Long Island power authority to educate consumers about utility-related matters and the regulatory process, opportunities to lower energy costs, including through energy efficiency and distributed generation, and other matters affecting consumers.

§ 13. Notwithstanding section 112 of the state finance law and notwithstanding any other provision of law to the contrary, including but not limited to any provision of law related to rebidding, letting or amending contracts of any amount, the Long Island Lighting Company dba LIPA is authorized to amend the operations services agreement, dated December 28, 2011, entered into with PSEG Long Island LLC, including Amendment Nos. 1 and 2 thereto, approved on June 27, 2012, solely by the following: (1) upon review and written recommendations made by the department of public service to the board of trustees of the Long Island power authority ("authority"), setting forth the reasons for and findings underlying such recommendations; and (2) adoption of a resolution by a majority of the authority's board of trustees.

§ 14. This act shall supersede the fifth project condition established in Resolution No. 97-LI-1 of the public authorities control board, dated July 16, 1997, related to the implementation of certain rate increases.

§ 15. Subdivision l of section 7208 of the education law, as amended by chapter 994 of the laws of 1971, is amended to read as follows:

l. The practice of engineering or land surveying, or using the title "engineer" or "surveyor" **(i)** exclusively as an officer or employee of a public service corporation by rendering to such corporation such services in connection with its lines and property which are subject to supervision with respect to the safety and security thereof by the

public service commission of this state, the interstate commerce commission or other federal regulatory body and so long as such person is thus actually and exclusively employed and no longer**, or (ii) exclusively as an officer or**

employee of the Long Island power authority or its service provider, as defined under section three-b of the public service law, by rendering to such authority or provider such services in connection with its lines and property which are located in such authority's service area and so long as such person is thus actually and exclusively employed and no longer;

§ 16. Repowering. If after the Long Island power authority, or its successor, determines, in accordance with the terms and conditions contained in the amended and restated power supply agreement ("A&R PSA"), dated October 10, 2012, between the authority and the owner of the legacy LILCO power generating facilities, that repowering any such generating facility is in the best interests of its ratepayers and will enhance the authority's ability to provide a more efficient, reliable and economical supply of electric energy in its service territory, consistent with the goal of improving environmental quality, the authority will exercise its rights under the A&R PSA related to repowering such facility, and shall enter into an agreement related to payments in lieu-of-taxes for a term commensurate with any power purchase agreement entered into related to such repowered facility, consistent with other such agreements related to generating facilities under contract to the authority in the service territory.

§ 17. This act shall take effect January 1, 2014; provided, however, that section twelve of this act shall take effect April 1, 2014, sections five, ten, eleven, thirteen, fourteen, fifteen and sixteen of this act shall take effect immediately; provided further that section thirteen of this act shall expire and be deemed repealed January 1, 2015; and provided further that the amendments to subdivision 6 of section 18-a of the public service law made by section two of this act shall not affect the repeal of such subdivision and shall be deemed repealed therewith.

PART B

Section 1. Legislative findings. The legislature hereby finds and determines:

1. On May 28, 1998, Long Island Power Authority (the authority) acquired all the capital stock and associated assets, including transmission and distribution (T&D) system assets of Long Island Lighting Company (LILCO) which does business as the retail electric utility on Long Island, New York under the name of LIPA. In connection with that acquisition, the authority took over ultimate responsibility for providing electric utility service to residential, commercial, industrial, nonprofit and governmental customers in the counties of Suffolk and Nassau and a portion of the county of Queens (hereinafter referred to as the "service area"). Such acquisition effectively converted LILCO from an investor-owned utility that was comprehensively regulated by the New York Public Service Commission (PSC) and the United States Federal Energy Regulatory Commission (FERC), to a municipal utility that is not comprehensively regulated either by the PSC or FERC.

2. Since May 28, 1998, neither the authority nor LIPA has directly operated or maintained the T&D system assets, provided electric service or billed and collected T&D rates from LIPA's customers; instead, the authority and LIPA have contracted out virtually all of these activities

to other companies. Most of these operations and service responsibilities have been contracted out to affiliates of a company now known as National Grid plc (National Grid), a multi-national electric and gas utility company organized under the laws of England and Wales pursuant to a management services agreement. Thus, while the LIPA name appears on customer bills as well as on service trucks and other equipment used in the service area,

affiliates of National Grid have been principally in charge of management and operation of the T&D system assets and providing electricity to consumers in the service area. The authority and LIPA have now contracted with affiliates of Public Service Enterprise Group and Lockheed Martin Services Inc. (PSEG-Lockheed) to provide operation and maintenance services for the T&D system assets for ten years starting January 1, 2014, when the National Grid contract expires.

3. High costs of electric utility service poses a serious threat to the economic well-being, health and safety of the residents of and the commerce and industry in the service area. High costs of electric utility service deter commerce and industry from locating in the service area and have caused existing commerce and industry to consider seriously moving out of the service area.

4. High debt and associated debt service contribute to the authority's high electric rates. The authority has approximately seven billion dollars in outstanding debt, a substantial portion of which was issued to refinance debt associated with construction of the now abandoned Shoreham nuclear power plant. The annual debt service associated with such bonds puts pressure on the authority's customer rates.

5. As of December 31, 2012, the three major rating agencies generally rated the authority's debt in the single-A range, though Moody's Investors Services assigns approximately seven hundred million dollars of the authority's debt slightly lower ratings of Baa1 and Baa2.

6. If securitized restructuring bonds were issued by a bankruptcy-remote entity with a AAA or equivalent rating in current market conditions to finance a portion of the costs of purchasing, redeeming or defeasing outstanding debt of the authority, and other associated costs, the debt service on the authority's debt could be reduced and the costs of electric utility service could be lowered.

7. Securitized restructuring bonds are likely to be most attractive to the investing public and result in the lowest possible yields if they are issued by a newly organized, special purpose public benefit corporation or other corporate municipal instrumentality of the state.

8. The purpose of this act is to provide a legislative foundation for the issuance of securitized restructuring bonds to refinance outstanding debt of the authority, a significant portion of which relates to LILCO's costs of constructing and financing the now abandoned Shoreham nuclear power plant, including the creation of restructuring property by the authority to provide for the redemption or defeasance of a portion of the outstanding debt of the authority. It is the intent of the legislature to authorize, for the purpose of reducing electric utility costs to consumers in the service area, the following: (a) the organization of a restructuring bond issuer as a special purpose corporate municipal instrumentality of the state, created for the limited purpose of issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt of the authority and associated costs, which securitized restructuring bonds create no new financial obligations or liabilities for the authority or for the state; and (b) implementation of contracts with owners of the securitized restructuring bonds through a

statutory pledge and agreement that the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds until those bonds are no longer outstanding and all

amounts due and owing under the related transaction documents have been paid in full.

9. Accordingly, the issuance of securitized restructuring bonds is expected to result in lower aggregate distribution and transmission charges and transition charges, compared to other available alternatives.

§ 2. Definitions. As used or referred to in this act, unless a differing meaning clearly appears from the context:

1. "Ancillary agreement" means any bond insurance policy, letter of credit, reserve account, surety bond, swap arrangement, hedging arrangement, liquidity or credit support arrangement or other similar agreement or arrangement entered into in connection with the issuance of restructuring bonds that is designed to promote the credit quality and marketability of such restructuring bonds or to mitigate the risk of an increase in interest rates.

2. "Approved restructuring costs" means, to the extent approved as such under a restructuring cost financing order,

(a) costs of purchasing, redeeming or defeasing a portion of outstanding debt of the authority, including bonds and notes issued by the authority, debt issued by the New York state energy research and development authority for the benefit of the LILCO;

(b) costs of terminating interest rate swap contracts and other financial contracts entered into by or for the benefit of the authority and related to debt obligations of the authority;

(c) rebate, yield reduction payments and any other amounts payable to the United States Treasury or to the Internal Revenue Service to preserve or protect the federal tax-exempt status of outstanding debt obligations of the authority; and (d) upfront financing costs associated with restructuring bonds.

3. "Assignee" means any individual, corporation, limited liability company, partnership or limited partnership, trust or other legally-recognized entity to which an interest in restructuring property is assigned, sold or transferred, other than as security, including any assignee of that party.

4. "Authority" means Long Island Power Authority, a corporate municipal instrumentality and political subdivision of the state.

5. "Consumer" means any individual, governmental body, trust, business entity, nonprofit organization or other legally-recognized entity that takes electric delivery service within the service area by means of electric transmission or distribution facilities, whether those electric transmission or distribution facilities are owned by LIPA or any other entity.

6. "Financing cost" means the costs to issue, service, or repay restructuring bonds, whether incurred upon issuance of such restructuring bonds or over the life of the restructuring bonds, and approved for recovery in a restructuring cost financing order. Without limitation, "financing cost" may include, as applicable, any of the following:

(a) principal, interest and redemption premiums payable on restructuring bonds;

(b) any payment required under an ancillary agreement and any amount required to fund or replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds;

(c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and

(d) any cost related to issuing restructuring bonds, administering the restructuring bond issuer and servicing restructuring property and

restructuring bonds, or related to the efforts to prepare or obtain approval of a restructuring cost financing order, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, trustee fees and expenses, legal fees and expenses, accounting fees and expenses, administrative fees and expenses, placement fees, underwriting fees, fees and expenses of the authority's advisors and outside counsel, if any, rating agency fees and any other related cost that is approved for recovery in the restructuring cost financing order.

7. "Financing entity" means the restructuring bond issuer, the authority or any servicer, trustee, collateral agent, and other person or entity acting for the benefit of owners of the restructuring bonds, the restructuring bond issuer or the authority that may own restructuring property or have rights to receive proceeds of restructuring bonds or to receive proceeds from the sale of restructuring property.

8. "LIPA" means Long Island Lighting Company, currently doing business under the name of LIPA.

9. "Ongoing financing costs" means financing costs that are not upfront financing costs. Ongoing financing costs include: (a) principal, interest and redemption premiums payable on restructuring bonds; (b) any payment required under an ancillary agreement and any amount required to replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to restructuring bonds; (c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and (d) any cost related to administering the restructuring bond issuer and servicing restructuring property or restructuring bonds, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, administrative fees and expenses, trustee fees and expenses, and legal fees and expenses, accounting fees and expenses, and rating agency fees, approved for recovery in the restructuring cost financing order. Ongoing financing costs shall include any excess of actual upfront financing costs over the estimate of upfront financing costs included in the principal amount of the restructuring bonds.

10. "Restructuring bond issuer" means the corporate municipal instrumentality of the state created under section four of this act.

11. "Restructuring bonds" means bonds or other evidences of indebtedness that are issued pursuant to an indenture or other agreement of the restructuring bond issuer under a restructuring cost financing order (a) the proceeds of which are used, directly or indirectly, to recover, finance, or refinance approved restructuring costs, (b) that are directly or indirectly secured by, or payable from, restructuring property, and (c) that have a term no longer than thirty years.

12. "Restructuring cost financing order" means an order by the authority, adopted in accordance with this act, which approves the imposition and collection of transition charges, and the financing of approved restructuring costs and upfront financing costs through the sale of restructuring property and the issuance of restructuring bonds, and which includes a procedure to require periodic adjustments to transition charges to ensure the collection of transition charges sufficient to

provide for the timely payment of scheduled debt service on the restructuring bonds and all other ongoing financing costs contemplated by the restructuring cost financing order.

13. "Restructuring property" means the property rights and interests created pursuant to this act, including, without limitation, the right, title, and interest: (a) in and to the transition charges established

pursuant to a restructuring cost financing order, as adjusted from time to time in accordance with the restructuring cost financing order; (b) in and to all revenues, collections, claims, payments, money, or proceeds of or arising from the transition charges or constituting transition charges that are the subject of a restructuring cost financing order, regardless of whether such revenues, collections, claims, payments, money, or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, claims, payments, money or proceeds; and (c) in and to all rights to obtain adjustments to the transition charges pursuant to the terms of the restructuring cost financing order. Restructuring property shall constitute a vested, presently existing property right notwithstanding the fact that the value of the property right will depend on further acts that have not yet occurred, including but not limited to, consumers remaining or becoming connected to the T&D system assets and taking electric delivery service, the imposition and billing of transition charges, or, in those instances where consumers are customers of LIPA or any successor owner of the T&D system assets, such owner performing certain services.

14. "Service area" means the geographical area within which LIPA provided electric distribution services as of the implementation date of this act.

15. "Servicer" means an entity authorized and required, by contract or otherwise, to impose, bill and collect transition charges, to prepare periodic reports regarding billings and collections of transition charges, to remit collections to the appropriate financing entity, and to provide other services contemplated by the restructuring cost financing order, which may include calculation of periodic adjustments to the transition charges or providing other services related to the restructuring property. Without limitation, LIPA or any successor owner of the T&D system assets, their agents or subcontractors, or any entity authorized to bill and collect T&D rates may be a servicer.

16. "Servicing fee" means, except to the extent otherwise specified in a restructuring cost financing order, the periodic amount paid pursuant to a servicing agreement, indenture or other such document to a servicer of restructuring property which amount shall approximate the estimated incremental cost of imposing, billing and collecting transition charges, preparing servicing reports and performing other customary servicing services required in connection with securitized bonds. A restructuring cost financing order may authorize a smaller fee payable to a successor servicer that is affiliated with a successor owner of the T&D system assets if the incremental cost of providing servicing services is less than LIPA's incremental costs. A restructuring cost financing order may authorize a larger fee payable to a successor servicer that is not affiliated with the owner of the T&D system assets or is not performing similar services with respect to the base rates of the owner of the T&D system assets if such larger fee is reasonably necessary to employ a reliable successor servicer.

17. "Successor regulator" means a regulatory department, commission or other instrumentality or subdivision of the state with jurisdiction to

regulate the T&D rates of LIPA or its successor as owner of the T&D system assets.

18. "Third-party biller" means any person or entity authorized, required or entitled to bill or collect transition charges or T&D rates other than the authority, LIPA or a successor owner of the T&D system assets, or a servicer.

19. "T&D rates" means rates and charges for electric transmission and distribution services in the service area. "T&D rates" shall not include charges for the generation or resale of electricity or any charges imposed to fund public purpose programs.

20. "T&D system assets" means the physically integrated system of electric transmission and distribution facilities (and other general property and equipment used in connection therewith) owned by LIPA as of the effective date of this act or thereafter acquired for use by LIPA or its successors in providing retail electric utility service to consumers in the service area.

21. "Transition charges" means those rates and charges relating to the T&D system assets that are separate and apart from base rates of LIPA or any successor owner of the T&D system assets and that are authorized in a restructuring cost financing order to recover from consumers the principal, interest and premium payable on restructuring bonds and the other ongoing financing costs associated with the restructuring bonds. As provided in paragraph (c) of subdivision 5 of section five of this act, transition charges shall be imposed on all consumers in the service area and collected by LIPA or any successor owner of the T&D system assets, their agents, subcontractors, assignees, collection agents or any other entity designated under the restructuring cost financing order.

22. "Upfront financing costs" means the fees and expenses to issue restructuring bonds, including, without limitation, expenses associated with the efforts to prepare or obtain approval of a restructuring cost financing order, as well as the fees and expenses associated with the structuring, marketing, and issuance of restructuring bonds, including, without limitation, counsel fees, structural advisory fees, underwriting fees and original issue discount, rating agency and trustee fees (including fees of trustee's counsel), accounting and auditing fees, printing and marketing expenses, stock exchange listing fees and compliance fees, filing fees, any applicable taxes, payments in lieu of taxes, the amount required to fund a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds, and fees and expenses of the authority's advisors and outside counsel, if any. Upfront financing costs include reimbursement to any person of amounts advanced for payment of such costs. Upfront financing costs do not include scheduled debt service or other ongoing financing costs, to the extent such ongoing financing costs are payable from transition charge revenues. If any upfront financing costs cannot be reasonably determined before the principal amount of restructuring bonds is fixed, such financing costs shall be estimated and the aggregate of such estimates shall be included as an upfront financing cost for purposes of determining the principal amount of restructuring bonds to be issued. If the actual upfront financing costs are greater than the estimated upfront financing costs, the difference shall be deemed to be an ongoing financing cost; if the actual upfront financing costs are less than the estimated upfront financing costs, the proceeds corresponding to such difference shall be used to pay ongoing financing costs.

§ 3. Procedure; judicial review. 1. Standard. The authority may prepare a restructuring cost financing order for the purpose of issuing restructuring bonds to refinance outstanding debt of the authority based on a finding that such bond issuance is expected to result in savings to consumers of electric transmission and distribution services in the service area on a net present value basis.

2. Public hearings. Notwithstanding any other provision of law to the

contrary, at any time after the effective date of this act, after making such finding, the authority shall schedule and hold one or more expedited public statement hearings on the proposed restructuring cost financing order. After the conclusion of such hearings and its review of any comments received, the authority shall finalize the restructuring cost financing order for submission to the board of trustees of the authority and to the public authorities control board ("PACB"). The PACB shall have the power and it shall be its duty to, upon receiving an application for approval of a restructuring cost financing order, within thirty days after receipt of such order, either approve, absent any conditions of approval, or disapprove such order based solely on the assumptions and conditions set forth in the restructuring cost financing order and whether such order complies with the standards set forth in this act. If the public authorities control board fails to approve or disapprove such restructuring cost financing order within such thirty day period, the PACB shall be deemed to have approved the restructuring cost financing order. If the board of trustees of the authority approves such restructuring cost financing order and the PACB approves or is deemed to have approved such restructuring cost financing order, the restructuring cost financing order shall become a final rate order by the authority.

3. Appeals. Because delay in the final determination of the petition will delay the issuance of restructuring bonds, thereby diminishing savings to consumers that might be achieved if the restructuring bonds were issued promptly after the issuance of the restructuring cost financing order, notwithstanding any other law to the contrary, any action, suit or proceeding to which the authority or the restructuring bond issuer may be a party, in which any question arises as to the validity of this act or any restructuring cost financing order, shall be preferred over all other civil causes in all courts of the state, except election matters, and shall be heard and determined in preference to all other civil business pending therein, except election matters, irrespective of position on the calendar. Such preference shall also be granted upon application of counsel to the authority in any action or proceeding questioning the validity of this act or any restructuring cost financing order in which such counsel may be allowed to intervene. Notwithstanding any other provision of law to the contrary, the validity of this act may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days of the effective date of this act, and the validity of any restructuring cost financing order may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days after such restructuring cost financing order becomes a final rate order by the authority; provided, however, that any such action, suit or proceeding and all supporting papers shall be filed directly to the Supreme Court, Appellate Division, Second Judicial Department.

4. Expiration of appeals. The authority shall provide written notification to the restructuring bond issuer upon the authority's determination that any and all actions, suits and proceedings challenging this

act and the final restructuring cost financing order have been denied or dismissed or the timing associated with the filing of such actions, suits and proceedings has lapsed or expired, and any related appeals have been exhausted or the timing related to such appeals has lapsed or expired.

5. Agreement to sell restructuring bonds. Within the time specified in

the restructuring cost financing order, after receiving notice from the authority that the time for petitions and appeals has lapsed or expired, the restructuring bond issuer shall enter into an agreement with one or more underwriters or purchasers satisfactory to the authority to sell the restructuring bonds in compliance with the restructuring cost financing order. No later than the third business day after the pricing of the restructuring bonds in accordance with such agreement, the initial servicer shall determine the initial transition charges and the expected savings to consumers in accordance with the restructuring cost financing order and shall file an issuance advice letter with the authority and the restructuring bond issuer setting forth the principal amount of restructuring bonds to be issued, the pricing, the net proceeds, the initial transition charges, the expected savings to consumers and any other information required by the restructuring cost financing order. No later than the end of the third business day after the filing of such issuance advice letter, the authority shall confirm in a notice to the restructuring bond issuer that such pricing complies with the restructuring cost financing order.

6. Issuance of restructuring bonds. Within ninety days after receiving notice of confirmation from the authority, the restructuring bond issuer shall issue the restructuring bonds, in one or more series or tranches and at one or more times, pursuant to the agreement to sell the restructuring bonds. The restructuring bond issuer shall purchase the restructuring property from the authority for a purchase price equal to the net proceeds from the sale of the restructuring bonds less any amounts of such proceeds required to fund or pay upfront financing costs.

7. Irrevocability. Upon the issuance of the restructuring bonds, the transition charges, including any adjustments thereof as provided in the restructuring cost financing order, shall be deemed established by the authority as irrevocable, final and effective without further action by the authority, or any other entity. The state, including the authority or any successor regulator, thereafter may not in any way take or permit any action to reduce, impair, postpone or terminate the transition charges approved in the restructuring cost financing order, as the same may be adjusted from time to time pursuant to subdivision 3 of section five of this act, or impair the restructuring property or the collection or recovery of transition charge revenues, including, but not limited to, either directly or indirectly by taking transition charges into account when setting other rates for any owner of the T&D system assets; nor shall the amount of revenues arising with respect to restructuring property be subject in any way to reduction, impairment, postponement, or termination.

8. Application of proceeds. The restructuring bond issuer shall cause the proceeds from its issuance of the restructuring bonds to be placed in one or more separate accounts and used only to pay or fund upfront financing costs and to purchase the restructuring property from the authority. The authority shall cause the proceeds from its sale of restructuring property to be placed in one or more separate accounts and used only to pay approved restructuring costs, and if funds remain in those accounts after the payment of all approved restructuring costs, to

make a refund or credit to consumers on the same basis that transition charges are then being imposed, to the extent such a refund or credit is practical.

§ 4. Creation of restructuring bond issuer. 1. Creation of restructuring bond issuer. For the purpose of effectuating the purposes

declared in section one of this act, there is hereby created a special purpose corporate municipal instrumentality of the state to be known as "utility debt securitization authority", which shall be a body corporate and politic, a political subdivision of the state, and a public benefit corporation, exercising essential governmental and public powers for the good of the public. The restructuring bond issuer shall not be created or organized, and its operations shall not be conducted, for the purpose of making a profit. No part of the revenues or assets of the restructuring bond issuer shall inure to the benefit of or be distributable to its trustees or officers or any other private persons, except as herein provided for actual services rendered.

2. Activities limited to issuing restructuring bonds and related activities.

(a) The restructuring bond issuer is hereby authorized to:

(i) issue the restructuring bonds contemplated by a restructuring cost financing order, and use the proceeds thereof to purchase or acquire, and to own, hold and use restructuring property or to pay or fund upfront financing costs provided, however, that the restructuring bond issuer shall only issue and sell restructuring bonds once;

(ii) contract for servicing of restructuring property and restructuring bonds and for administrative services; and

(iii) pledge the restructuring property to secure the restructuring bonds and the payment of ongoing financing costs, all pursuant to section seven of this act.

(b) So long as any restructuring bonds remain outstanding, the restructuring bond issuer shall not be authorized to merge or consolidate, directly or indirectly, with any person or entity. Additionally, the restructuring bond issuer shall not have the power or authority to incur, guarantee or otherwise become obligated to pay any debt or other obligations other than the restructuring bonds and financing costs unless otherwise permitted by the restructuring cost financing order. The restructuring bond issuer shall keep its assets and liabilities separate and distinct from those of any other entity.

(c) The restructuring bond issuer shall have no additional authority to engage in other business activities; provided, however, that in connection with the powers specified in paragraph (a) of subdivision 2 of this section, as a financing entity, the restructuring bond issuer shall have the power to:

(i) sue and be sued;

(ii) have a seal and alter the same at pleasure;

(iii) make and alter by-laws for its organization and internal management and make rules and regulations governing the use of its property;

(iv) make and execute contracts and all other instruments necessary or convenient for the exercise of its powers and functions under this act and to commence any action to protect or enforce any right conferred upon it by any law, contract or other agreement, including, without limitation, make and execute contracts with the authority, LIPA or any successor owner of the T&D system assets, any servicers, any financing entity or any other public or private entities to service restructuring property owned by restructuring bond issuer, to service restructuring bonds issued by restructuring bond issuer, and to provide services in

administering the restructuring bond issuer, and to pay compensation for such services;

(v) appoint officers, agents and employees, prescribe their duties and qualifications, fix their compensation and engage the services of

private consultants, accountants, counsel and others on a contract basis for rendering professional and technical assistance and advice;

(vi) pay its operating expenses, scheduled debt service on the restructuring bonds and other ongoing financing costs;

(vii) issue restructuring bonds and provide for the rights of the holders thereof;

(viii) procure insurance against any loss in connection with its activities, properties and assets in such amount and from such insurers as it deems desirable;

(ix) invest any funds or other moneys under its custody and control in investment securities or under any ancillary agreement;

(x) establish and maintain such reserves, special funds and accounts, to be held in trust or otherwise, as may be required by agreements made in connection with the restructuring bonds, or any agreement between itself and third parties;

(xi) as security for the payment of the principal of and interest on any restructuring bonds issued by it pursuant to this act, and any agreement made in connection therewith, pledge all or any part of its revenues or assets, including, without limitation, restructuring property, unspent proceeds of its restructuring bonds, transition charge revenues, and earnings from the investment and reinvestment of unspent proceeds of its restructuring bonds and transition charge revenues; and

(xii) do any and all things necessary or convenient to carry out its purposes and exercise the powers expressly given and granted in this section.

3. No authority to file for bankruptcy protection. The restructuring bond issuer shall not be authorized to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. No governmental officer or organization is empowered to authorize, whether by executive order or otherwise, restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. Until at least one year and one day after all restructuring bonds issued by restructuring bond issuer have ceased to be outstanding and all unpaid financing costs have been paid, the state hereby pledges, contracts and agrees with owners of restructuring bonds issued by restructuring bond issuer that the state will not limit or alter the denial of authority to the restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code.

4. Governance. The restructuring bond issuer shall be governed by a board consisting of three trustees appointed by the governor. The trustees shall not be trustees, directors, officers, or employees of the authority, LIPA or any successor owner of the T&D system assets.

(a) One of the trustees first appointed shall serve for a term ending four years from January first next succeeding his appointment; one of such trustees shall serve for a term ending five years from such date; and one of such trustees shall serve for a term ending six years from such date. Their successors shall serve for terms of six years each. Trustees shall continue in office until their successors have been appointed and qualified and the provisions of section 39 of the public officers law shall apply. In the event of a vacancy occurring in the

office of a trustee by death, removal, resignation or otherwise, the Governor shall appoint a successor to serve for the balance of the unexpired term.

(b) Trustees shall serve without salary or other compensation, but each trustee shall be entitled to reimbursement for actual and necessary expenses incurred in the performance of his or her official duties.

(c) A majority of the trustees shall constitute a quorum for the transaction of any business or the exercise of any power or function of restructuring bond issuer. Any one or more trustees may participate in a meeting of the board by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation by such means shall constitute presence in person at a meeting. The board may delegate to one or more of its trustees, or officers, agents and employees, such powers and duties as the board may deem proper.

(d) Such trustees may engage in private employment, or in a profession or business. Restructuring bond issuer, its trustees, officers and employees shall be subject to the provisions of sections 73 and 74 of the public officers law.

(e) Notwithstanding any inconsistent provision of law to the contrary, general, special or local, no officer of the state or of any civil division thereof shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of an appointment as trustee of restructuring bond issuer.

(f) The governor may remove any trustee for inefficiency, neglect of duty or misconduct in office after giving him or her a copy of the charges against him or her and an opportunity to be heard, in person or by counsel, in his or her defense, upon not less than ten days notice. If any trustee shall be so removed, the governor shall file in the office of the department of state a complete statement of the charges made against such trustee and his or her findings thereon, together with a complete record of the proceedings.

(g) Each trustee shall have a fiduciary duty to act in the best interests of the restructuring bond issuer, including its creditors, the owners of the restructuring bonds, and such other duties as may be specified in the organizational documents or other agreements of the restructuring bond issuer.

(h) The restructuring bond issuer and its corporate existence shall continue until one year and one day after all restructuring bonds and ongoing financing costs and other indebtedness of restructuring bond issuer have been actually paid and all its other liabilities and obligations have been paid, met or otherwise discharged. Upon termination of the existence of restructuring bond issuer, all of its rights and property shall pass to and be vested in the state.

§ 5. Restructuring cost financing orders. 1. Content of restructuring cost financing orders. The restructuring cost financing order shall include the following: (i) a description of the approved restructuring costs; (ii) the amount of approved restructuring costs that the authority proposes to pay through the sale of the restructuring property and the issuance of the restructuring bonds; (iii) designation of the authority as the entity in which initial ownership of restructuring property will vest; (iv) an estimate of the date on which restructuring bonds will be issued and the expected scheduled term to maturity of the restructuring bonds; (v) a description of the estimated debt service on the restructuring bonds and other ongoing financing costs that may be recovered through transition charges; as part of this description, the

restructuring cost financing order may include qualitative or quantitative limitations on financing costs approved to be recovered provided

that no such limitation on financing costs shall impair the ability of the restructuring bond issuer to pay and service the restructuring bonds in accordance with their terms; (vi) a proposed methodology for allocating transition charges on an equal percentage basis among customer service classifications and among volumetric (kWh) and demand (kW) charges within those customer service classifications, along with an associated bill impact analysis of the proposed methodology; (vii) a description of the proposed adjustment mechanism to reconcile actual collections with forecasted collection on at least an annual basis and a finding that the adjustment mechanism is just and reasonable; (viii) a description of the benefits to consumers in the service area that are expected to result from the sale of the restructuring property and the issuance of restructuring bonds as opposed to traditional alternative financing mechanisms; (ix) specifying the entity that will contract to act as servicer with respect to the restructuring property and the restructuring bonds on terms and conditions mutually acceptable to such servicer and the restructuring bond issuer; (x) specifying the entity or entities that will contract to provide administrative or other services to the restructuring bond issuer; (xi) specifying when the restructuring property will be created and vest and addressing such other matters as may be necessary or desirable for the marketing or servicing of the restructuring bonds or the servicing of the restructuring property; (xii) authorizing the imposition, billing and collection of transition charges to pay debt service on the restructuring bonds and other ongoing financing costs; (xiii) a description of the restructuring property that will be created and that may be used to pay and secure the payment of the restructuring bonds approved to be issued in the restructuring cost financing order; (xiv) a requirement that the amounts in the debt service reserve accounts or other accounts funded with the proceeds of restructuring bonds or transition charges be fully used, to the extent practical, to make the final payments of principal and interest on the restructuring bonds and other ongoing financing costs or to make refunds to consumers on the same basis as such consumers would have then been obligated to pay transition costs; and (xv) the finding required by subdivision 1 of section 3 of this act.

2. Periodic reports. A restructuring cost financing order shall require the restructuring bond issuer or the servicer to file at least annually with the authority and the appropriate financing entity a periodic report showing the billing and collection of transition charges, the application of transition charge revenues to debt service on the restructuring bonds and other ongoing financing costs, and the balances in any debt service reserve accounts or other accounts required by the restructuring cost financing order.

3. Adjustment mechanism.

(a) Each restructuring cost financing order shall include a mathematical formula for making periodic adjustments to the transition charges. The mathematical formula shall apply the following principles:

(i) The transition charges will be adjusted at least annually to ensure that the collections of transition charges are adequate to pay principal and interest on the associated restructuring bonds when due pursuant to the expected amortization schedule, to fund all debt service reserve accounts to the required levels and to pay when due all other expected ongoing financing costs.

(ii) The adjustments of transition charges will take into account historical and reasonably foreseeable differences between amounts billed

and amounts collected due to applicable taxes, consumer defaults and delays, billing lags, write-offs and other factors.

(iii) The adjustments of transition charges will take into account historical and reasonably foreseeable variations in billings due to variations in electricity consumption associated with the seasons, storms and other weather conditions, outages, gain or loss of consumers, efficiencies, electric vehicles, economic conditions or other factors.

(iv) The adjustments of transition charges will take into account any over-collection or under-collection of transition charges so that, to the extent practical, the outstanding balance of restructuring bonds is equal to the scheduled balance on the expected amortization schedule, the amounts in the debt service reserve accounts are equal to the required reserve level, and all ongoing financing costs are paid when due.

(v) The adjustments of transition charges will be applied ratably to the transition charges for each customer service classification.

(b) Once restructuring bonds have been issued, the adjustment mechanism specified in the restructuring cost financing order shall be applied to correct for any over-collection or under-collection of transition charges and to provide for timely payment of scheduled principal of and interest on the restructuring bonds and the payment and recovery of other ongoing financing costs in accordance with the restructuring cost financing order. Application of the adjustment mechanism shall occur at least annually or more frequently as provided in the restructuring cost financing order. A notice of such periodic adjustment of transition charges shall be filed with the authority by or on behalf of the owner of restructuring property and a copy shall be provided to the owner of the T&D system assets at least sixty days before the adjustment is to take effect, provided that the restructuring bond issuer may request an earlier effective date.

(c) Each adjustment to the transition charge, in amounts as calculated by or on behalf of the owner of restructuring property, shall automatically become effective sixty days following the date on which the notice of periodic adjustment is filed with the authority unless the authority approves an earlier effective date requested by the restructuring bond issuer.

(d) Notwithstanding any other provision of law to the contrary, the authority shall allow interested parties thirty days from the date of filing of the notice for adjustment within which to make comments. Such comments shall be limited to the mathematical accuracy of the calculations of the amount of the adjustments. If the authority determines that the calculation of the transition charge adjustment in the notice was mathematically inaccurate, the transition charge adjustment shall be changed as soon as it is reasonably practical to do so, but estimated overcollections or undercollections resulting from the mathematical error shall be taken into account in the next succeeding periodic adjustment.

(e) No adjustment pursuant to this section shall in any way affect the irrevocability of the restructuring cost financing order as specified in subdivision 4 of section five of this act. No adjustment pursuant to this section shall require any approvals or action under any other law or shall be deemed to be the establishment of a new charge, fee or rate under any law.

4. Irrevocability of restructuring cost financing orders.

(a) A restructuring cost financing order shall be an irrevocable final

rate order when the time for any actions, suits, proceedings and appeals challenging such final restructuring cost financing order has lapsed or expired as provided in subdivision 3 of section three of this act.

(b) A restructuring cost financing order may be amended on or after the date of issuance of restructuring bonds approved thereunder only: (i) at the request of the authority; (ii) in accordance with any restrictions and limitations on amendment set forth in the restructuring cost financing order; (iii) subject to the limitations set forth in subdivision 7 of section three of this act; and (iv) upon approval by the PACB within thirty days of receipt of such amendment; provided, however, that if no approval or disapproval is made within such time, the amendment shall be deemed approved.

(c) This act, and any restructuring cost financing order made pursuant to this act, shall not be interpreted to alter or limit the rights vested in the authority to establish sufficient T&D rates to pay and perform all of its obligations and contracts with the authority's bondholders and others when due.

5. Effect of restructuring cost financing order.

(a) A restructuring cost financing order shall remain in effect and unabated until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all ongoing financing and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) A restructuring cost financing order shall remain in effect and unabated notwithstanding the bankruptcy, reorganization or insolvency of the authority, the restructuring bond issuer, LIPA or any successor owner of the T&D system assets, or any affiliate of the aforementioned, or the commencement of any judicial or nonjudicial proceeding therefor.

(c) For so long as restructuring bonds issued pursuant to a restructuring cost financing order are outstanding, and the related approved restructuring costs have not been paid in full, the transition charges authorized in the restructuring cost financing order shall be non-bypassable and shall apply to all consumers connected to the T&D system assets and taking electric delivery service located within the service area, whether or not the consumers produce their own electricity or purchase electric generation services from a provider of electric generation services other than the owner of the T&D system assets and whether or not the T&D system assets continue to be owned by LIPA.

§ 6. Restructuring bonds. 1. No recourse. Restructuring bonds shall be without recourse to the credit or any assets of the authority, LIPA and the restructuring bond issuer, other than the restructuring property and other assets and revenues of restructuring bond issuer as specified in the pertinent restructuring cost financing order.

2. Exemption from taxation.

(a) It is hereby found and declared that the activities of the restructuring bond issuer are primarily for the benefit of the people of the state of New York, for the improvement of their welfare and prosperity, and is a public purpose, and the restructuring bond issuer shall be regarded as performing an essential governmental function in carrying out the provisions of this act.

(b) The restructuring bond issuer shall not be required to pay taxes or assessments upon any of the property acquired or controlled by it or upon its activities in the use thereof or upon income derived therefrom.

(c) Restructuring bonds, their transfer and the income therefrom shall, at all times, be free from taxation by the state or any munici-

pality, except for estate and gift taxes.

3. Restructuring bonds not debt of the state. Restructuring bonds issued pursuant to a restructuring cost financing order and the provisions of this act shall not constitute a debt, general obligation or a pledge of the faith and credit or taxing power of the state or of any county, municipality or any other political subdivision, agency or instrumentality of the state. Holders of restructuring bonds shall not be taxed by the legislature or the taxing authority of any county, municipality or any other political subdivision, agency or instrumentality of this state for the payment of the principal thereof or interest thereon. The issuance of restructuring bonds does not obligate the state or any county, municipality or any other political subdivision, agency or instrumentality of the state to levy any tax or make any appropriation for payment of the principal of or interest on the restructuring bonds. All restructuring bonds must contain a statement to the following effect: "Neither the full faith and credit nor the taxing power of the state of New York is pledged to the payment of the principal of, or interest on, this bond."

4. Restructuring bonds as legal investments. Any restructuring bonds issued by the restructuring bond issuer are hereby made securities in which all public officers and bodies of this state and all municipalities, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings associations, including savings and loan associations, building and loan associations, investment companies and other persons carrying on a banking business, all trusts, estates and guardianships and all other persons whatsoever, who are now or may hereafter be authorized to invest in bonds or other obligations of this state, may properly and legally invest funds, including capital in their control or belonging to them. The restructuring bonds are also hereby made securities which may be deposited with and shall be received by all public officers and bodies of the state and all municipalities for any purpose for which the deposit of bonds or other obligations of the state is now or may hereafter be authorized.

§ 7. Restructuring property. 1. (a) Restructuring property that is created pursuant to a restructuring cost financing order shall constitute an existing, present property right, notwithstanding the fact that the imposition and collection of transition charges will depend on further acts that have not yet occurred, including but not limited to: (i) LIPA or any successor owner of the T&D system assets delivering electric energy or related services, (ii) a servicer performing servicing functions relating to the collection of transition charges, or (iii) the level of future consumption of electric energy. Restructuring property shall exist whether or not transition charges have been imposed, billed, accrued or collected and notwithstanding the fact that the value or amount of the restructuring property is dependent on the future provision of service to customers by LIPA or any successor owner of the T&D system assets.

(b) All restructuring property created pursuant to a restructuring cost financing order shall continue to exist until the restructuring bonds issued pursuant to such restructuring cost financing order are paid in full and all ongoing financing costs relating to the restructuring bonds have been paid in full.

(c) The restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of

restructuring property may be pledged to secure the payment of restructuring bonds, amounts payable to financing parties, amounts payable to holders of restructuring bonds, amounts payable under any ancillary agreement and other ongoing financing costs. So long as the restructuring property remains pledged to secure the restructuring bonds, revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs. After the occurrence of an event of default with respect to the restructuring bonds, all or any portion of restructuring property may be transferred, sold, conveyed or assigned to any person or entity. Any transfer, sale, conveyance, assignment, grant of a security interest in or pledge of restructuring property by the authority, the restructuring bond issuer, or other financing entity, to the extent previously approved in a restructuring cost financing order, does not require the prior consent and approval of any other person or entity under the public service law or any other law.

(d) If the owner of the T&D system assets, servicer, third-party biller, or any other person or entity authorized to collect transition charges, defaults on any required remittance of transition charge revenues, any court in the state, upon application by an interested party and without limiting any other remedies available to the applying party, shall order the sequestration and payment of the transition charge revenues for the benefit of the owners or pledgees of restructuring property. The order shall remain in full force and effect notwithstanding any bankruptcy, reorganization, or other insolvency proceedings with respect to a servicer, authority, LIPA or any successor owner of the T&D system assets or any affiliate thereof or of any other person or entity.

(e) Restructuring property, transition charges, transition charge revenues, and the interests of an assignee, bondholder, financing party or any other person in restructuring property or in transition charge revenues, are not subject to setoff, counterclaim, surcharge or defense by a servicer, any consumer, the authority, LIPA or any successor owner of the T&D system assets or any other person or in connection with any default, bankruptcy, reorganization or other insolvency proceeding of the authority, LIPA or any successor owner of the T&D system assets, any affiliate thereof or any other entity or otherwise. To the extent that any consumer makes a partial payment of a bill containing both transition charges and any other charges, such payment shall be allocated pro rata between the transition charges and the other charges unless the consumer specifies that a greater proportion of such payment is to be allocated to the transition charges, except that the other charges shall be reduced by the amount of any claims of setoff, counterclaim, surcharge or defense for purposes of such allocation.

(f) Any successor owner of the T&D system assets and any successor servicer shall be bound by the requirements of this act and shall perform and satisfy all obligations of a servicer in the same manner and to the same extent under a restructuring cost financing order as did LIPA and the initial servicer, including, without limitation, the obligation to impose, bill and collect the transition charges and to pay such collections to the person entitled to receive the transition charge revenues.

2. Security interests. Any pledge of restructuring property or proceeds thereof, including any moneys, revenues or property or of a revenue producing contract or contracts constituting part of the

restructuring property, made by the owner of restructuring property,

shall be perfected, valid and binding from the time when the pledge is made. The proceeds, moneys, revenues or proceeds so pledged and thereafter received by the owner of restructuring property shall immediately be subject to the lien of such pledge, and such lien shall be perfected, without any physical delivery thereof or further act. The lien of any such pledge shall be perfected, valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the owner of restructuring property irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens obtained by such claimants or transferees. The description of the restructuring property in a pledge or security agreement and any financing statement is sufficient if and only if the description refers to this Act and the restructuring cost financing order creating such restructuring property. No instrument by which a pledge or lien is created pursuant to this subdivision need be recorded in order to perfect such pledge or lien. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article 9 of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that the secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed. A pledge of restructuring property is a continuously perfected security interest and has priority over any other lien, created by operation of law or otherwise, that may subsequently attach to that restructuring property or proceeds thereof unless the holder of any such lien has agreed in writing otherwise. Any pledgee of restructuring property shall have a perfected security interest in the amount of all restructuring property revenues or other proceeds that are deposited in any deposit account or other account of the servicer or other entity in which restructuring property revenues or other proceeds have been commingled with other funds. Any other security interest that may apply to restructuring revenues or other proceeds shall be terminated when such revenues or proceeds are transferred to a segregated account for an assignee or a financing party. No application of the adjustment mechanism as described in this act shall affect the validity, perfection, or priority of a pledge of, security interest in or the sale or transfer of restructuring property.

3. Sales of restructuring property.

(a) A transfer of all or any portion of restructuring property, which the parties in the governing documentation have expressly stated to be a sale or other absolute transfer, in a transaction approved in a restructuring cost financing order, shall be treated as an absolute transfer of all of the transferor's right, title, and interest (as in a true sale), and not as a pledge or other financing, of the restructuring property, other than for federal, state and local income and franchise tax purposes.

(b) Any transfer of an interest in restructuring property shall be perfected, vested, valid and binding from the time when the transfer is made. Such transfer shall be perfected, vested, valid and binding as against the transferor, all parties having claims of any kind in tort, contract or otherwise against the transferor, and all other transferees of the transferor, irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens

obtained by such claimants or transferees. The description of the restructuring property in a sale or transfer agreement and any financing statement is sufficient if and only if the description refers to this act and the restructuring cost financing order creating such restructuring property. No instrument by which a transfer is created pursuant to this section need be recorded in order to perfect such transfer. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article nine of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that such secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed.

(c) The characterization of the sale, assignment or transfer as an absolute transfer and true sale and the corresponding characterization of the property interest of the purchaser, shall not adversely be affected or impaired by, among other things, the occurrence of any of the following factors: (i) commingling of revenues or other proceeds from transition charges with other amounts; (ii) the retention by the seller of: (A) a partial or residual interest, including an equity interest, in the restructuring property, whether direct or indirect, or whether subordinate or otherwise; or (B) the right to recover costs associated with taxes, payments in lieu of taxes, franchise fees or license fees imposed on the collection of transition charges; (iii) any recourse that the purchaser may have against the seller; (iv) any indemnification rights, obligations or repurchase rights made or provided by the seller; (v) the obligation of the seller to collect transition charges on behalf of an assignee, including but not limited to, any retention by the seller to bare legal title for the purpose of collecting transition charges; (vi) the treatment of the sale, assignment or transfer for tax, financial reporting or other purposes; (vii) any subsequent order of the authority amending a restructuring cost financing order pursuant to paragraph (b) of subdivision 4 of section five of this act; or (viii) any application of the adjustment mechanism as provided in subdivision 3 of section five of this act.

(d) An assignee or financing party shall not be considered to be a public utility or person providing electric service solely by virtue of the transactions described in this act.

§ 8. Rights and duties while restructuring bonds are outstanding. 1. Responsibilities of the authority. (a) For the purpose of investigating compliance with the provisions of this act and the applicable restructuring cost financing order, the authority shall have the right, jurisdiction, power and authority to examine the books and records of LIPA or any successor owner of the T&D system assets, the restructuring bond issuer, any other financing entity, any servicer, any third-party biller and any other person or entity that owns restructuring property or has the right to impose, bill or collect transition charges until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all financing costs relating to such restructuring bonds have been paid in full.

(b) Neither the authority nor any successor regulator may, in exercising its powers and carrying out its duties regarding regulation and ratemaking, consider restructuring bonds issued pursuant to the restructuring cost financing order to be the debt of any owner of the T&D

system assets, consider transition charges paid under the restructuring cost financing order to be revenue of any owner of the T&D system assets, or consider the approved restructuring costs or ongoing financing costs specified in the restructuring cost financing order to be costs of any owner of the T&D system assets or any affiliate, nor may the authority or any successor regulator determine that any action taken by any owner of the T&D system assets that is consistent with the restructuring cost financing order is unjust or unreasonable from a regulatory or ratemaking perspective; provided that, subject to the limitations set forth in subdivision 4 of section five of this act and the state pledge in section nine of this act, nothing in this subdivision shall (i) affect the authority to apply the adjustment mechanism as provided in subdivision 3 of section five of this act; (ii) prevent or preclude the authority from investigating the compliance of any owner of the T&D system assets and of any financing entity with the terms and conditions of a restructuring cost financing order and requiring compliance therewith; or (iii) prevent or preclude the authority or any successor regulator from imposing regulatory sanctions against any owner of the T&D system assets for failure to comply with the terms and conditions of a restructuring cost financing order or the requirements of this act. When setting other rates for any owner of the T&D system assets, nothing in this act shall prevent the authority or any successor regulator from taking into account the collection by such owner of servicing fees in excess of incremental costs of providing servicing services, or the collection by such owner of administration fees in excess of incremental costs of providing administration services; provided that this would not result in a recharacterization of the tax, accounting, and other intended characteristics of the financing, including, but not limited to, either of the following: (i) treating restructuring bonds as debt for federal income tax purposes; or (ii) treating any transfer of the restructuring property to the restructuring bond issuer or to any other financing entity as a true sale for bankruptcy purposes.

2. Duties of financing entities and any owner of T&D system assets.

(a) Any failure of any financing entity to apply the proceeds of restructuring bonds, or proceeds from the sale of restructuring property, in a reasonable, prudent and appropriate manner or otherwise comply with any provision of this act shall not invalidate, impair or affect any restructuring cost financing order, restructuring property, transition charge, or restructuring bonds.

(b) Any owner of T&D system assets, any servicer, any third-party biller and any other entity that bills or collects T&D rates shall simultaneously impose, bill and collect any transition charges applicable to consumers in the service area, including all consumers connected to the T&D system assets and taking electric delivery service located within the service area, shall allocate partial payments by consumers as provided in this act, shall terminate service to non-paying consumers on the same basis as termination of service is permitted for non-payment of T&D rates, shall exercise all enforcement rights of the owner or pledgee of the restructuring property for the benefit of such owner or pledgee, and shall remit any transition charge revenue to the owner or pledgee of the restructuring property.

§ 9. State pledge. (a) The state pledges to and agrees with the holders of restructuring bonds, any assignee and all financing entities that the state will not in any way take or permit any action that limits, alters or impairs the value of restructuring property or, except as

required by the adjustment mechanism described in the restructuring cost financing order, reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) Any person who issues restructuring bonds is permitted to include the pledge specified in subdivision (a) of this section in the restructuring bonds, ancillary agreements and documentation related to the issuance and marketing of the restructuring bonds.

§ 10. Choice of law. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in any restructuring property, transition charge or restructuring cost financing order, shall be the laws of the state of New York.

§ 11. Conflicts. In the event of conflict between this act and any other law regarding the attachment, assignment or perfection, or the effect of perfection, or priority of any pledge of, security interest in or transfer of restructuring property, this act shall govern to the extent of the conflict. In the event of conflict between this act and the public service law, the Long Island power authority act or any other law, this act shall govern to the extent of the conflict. Notwithstanding any provisions of law to the contrary, no approvals, notices or authorizations other than those specified in this act shall be required with respect to any restructuring cost financing order, and the transactions and contracts authorized in or contemplated by this act or any restructuring cost financing order, including but not limited to the incurrence and payment of any financing costs, the incurrence or payment of any approved restructuring costs, the issuance of restructuring bonds, the sale or other transfer of restructuring property, and any contracts and expenses incurred to facilitate the preparation of any restructuring cost financing order.

§ 12. Effect of invalidity on actions. Effective on the date that restructuring bonds are first issued under this act, if any provision of this act is held to be invalid or is invalidated, superseded, replaced, repealed or expires for any reason, that occurrence shall not affect any action allowed under this act that is taken by the authority, LIPA, the restructuring bond issuer, any owner of T&D system assets, an assignee, a collection agent, a financing party, a holder of restructuring bonds or a party to an ancillary agreement and any such action shall remain in full force and effect.

§ 13. Effectiveness of the act. The authority may not adopt its first restructuring cost financing order after the five year period after the effective date of this act.

§ 14. Severability. If any section, subdivision, paragraph or subparagraph of this act or the application thereof to any person, circumstance or transaction is held by a court of competent jurisdiction to be unconstitutional or invalid, the unconstitutionality or invalidity shall not affect the constitutionality or validity of any other section, subdivision, paragraph or subparagraph of this act or its application or validity to any person, circumstance or transaction, including, without limitation, the irrevocability of a restructuring cost financing order

ing bonds, the imposition of transition charges, the transfer or assignment of restructuring property or the collection and recovery of revenues from transition charges. To these ends, the legislature hereby declares that the provisions of this act are intended to be severable and that the legislature would have enacted this act even if any section, subdivision, paragraph or subparagraph of this act held to be unconstitutional or invalid had not been included in this act.

§ 15. Standing. (a) The owner of restructuring property, or the trustee representing holders of restructuring bonds, shall be expressly permitted hereby to bring actions against any owner of the T&D system assets, any third-party biller, or any other entity authorized to bill or collect T&D rates, any consumers in the service area or any other person or entity for failure to impose, bill, pay or collect any transition charges constituting part of the restructuring property then held pledged as security for such restructuring bonds or for enforcement of any other provision of this act or the applicable restructuring cost financing order.

(b) Except as provided in section three of this act, any court and the authority shall have jurisdiction over any actions for failure to impose, bill, pay or collect any transition charges or for enforcement of other provision of this act or any restructuring cost financing order.

§ 16. Third-party billing. If and to the extent that third parties are allowed to bill and/or collect any transition charges, the authority, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers, which generally would include (i) operational standards and minimum credit requirements for any such third-party biller, or require a cash deposit, letter of credit or other credit mitigant in lieu thereof, to minimize the likelihood that defaults by a third-party biller would result in an increase in transition charges thereafter billed to consumers, (ii) a finding that, regardless of who is responsible for billing, consumers shall continue to be responsible for transition charges, (iii) if a third party meters and bills for the transition charges, that the owner of the T&D system assets and any servicer must have access to information on billing and usage by consumers to provide for proper reporting to the restructuring bond issuer and to perform its obligations as servicer, (iv) in the case of a default by a third-party biller, billing responsibilities must be promptly transferred to another party to minimize potential losses, and (v) the failure of consumers to pay transition charges shall allow service termination by the owner of the T&D system assets on behalf of the restructuring bond issuer of the consumers failing to pay transition charges in accordance with service termination rules and orders applicable to T&D rates. Any costs associated with such third-party billing and/or collection shall be included as part of the recoverable ongoing financing costs or other rates or charges, as appropriate. Further, the authority and any successor regulator shall not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the then current ratings on any tranche or series of the restructuring bonds by any nationally recognized statistical rating organization designated by the restructuring bond issuer.

§ 17. This act shall take effect immediately.

§ 2. Severability clause. If any clause, sentence, paragraph, subdivi-

sion, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not take

affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part thereof directly involved in the controversy in which such judgment shall have been rendered. It is hereby declared to be the intent of the legislature that this act would have been enacted even if such invalid provisions had not been included herein.

§ 3. This act shall take effect immediately; provided, however, that the applicable effective date of Parts A through B of this act shall be as specifically set forth in the last section of such Parts.

The Legislature of the STATE OF NEW YORK **ss:**

Pursuant to the authority vested in us by section 70-b of the Public Officers Law, we hereby jointly certify that this slip copy of this session law was printed under our direction and, in accordance with such section, is entitled to be read into evidence.

DEAN G. SKELOS
Temporary President of the Senate

SHELDON SILVER
Speaker of the Assembly

Overview of Long Island Power Authority

Long Island Power Authority (LIPA) is a not-for-profit public utility and the owner of transmission and distribution networks in Long Island, New York. It is established by statute and the state governor has power to appoint board members. LIPA has entered into a management contracts with the Public Service Enterprise Group (PSEG), a publicly traded utility company in New Jersey, and PSEG's subsidiary now manages the billing and day-to-day operations of the distribution network.

Summary of LIPA Reform Act

Section 1(8) of Part B of the Long Island Power Authority Reform Act, 2013 (the LIPA Reform Act) provides the legislative purpose of the act, which is "to refinance outstanding debt of LIPA, a significant portion of which relates to the cost of constructing and financing the now abandoned Shoreham nuclear power plant". The Act authorizes the creation of a restructuring bond issuer for the limited purpose of "issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt". This section also makes it clear that it is the intention of the legislature to provide a statutory pledge (found in s. 9 of the LIPA Reform Act) that until the restructuring bonds are paid in full, "the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds".

The definitions in section 2 of the LIPA Reform Act provide some clarity to the mechanisms for the securitization regime. Restructuring bonds are issued by the "restructuring bond issuer" (which is established under section 4 of the LIPA Reform Act and known as the "Utility Debt Securitization Authority", or UDSA) and secured by the "restructuring property", which is essentially the property interest in a future revenue stream. In section 2(13), "restructuring property" is defined to include the property rights and interests in the "transition charges". As defined in s. 2(21), transition charges are established and may be amended from time to time in accordance with a restructuring cost financing order, and they are a component of the delivery line on the utility bills.

Section 3 provides the procedures for issuing restructuring bonds by the restructuring bond issuer, and includes appeal procedures and public hearing provisions. Section 4 provides the authority to establish the UDSA as a public corporation, the scope of its activities and its governance structure. It should be noted that section 4(2)(a)(i) provides that "the restructuring bond issuer shall only issue and sell restructuring bonds once" (please also see summary of 2015 amendments below). The UDSA also issues the restructuring cost financing orders in accordance with section 5.

Section 6 sets out the features of the restructuring bonds. Section 6(1) limits bond purchaser's remedies to the restructuring property, i.e. the property interest in a future revenue stream. The restructuring bonds are tax-exempt (section 6(2)), and are not debt of the state (section 6(3)).

Section 7 governs the restructuring property and creates a property interest and security interest in the future revenue stream arising from "transition charges". Section 7(1)(c) provides that "[t]he restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of restructuring property may be pledged to secure the payment of restructuring bonds", and "revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs."

Section 8(2) provides that any owner of the transmission and distribution network or any other entity that collects the delivery charges on behalf of the owner shall impose the transition charges on the consumers, and shall remit such revenues to the owner or pledgee of the restructuring property.

Section 9 provides the pledge from the state not to take actions to impair the value of the restructuring property. Sections 10 to 17 include procedural provisions such as conflicts, third-party billing and standing.

Summary of 2015 Amendments to LIPA Reform Act

The LIPA Reform Act was further amended in 2015 to permit the issuance of additional restructuring bonds by UDSA or a separate "Utility Debt Securitization Authority No. 2" up to an aggregate maximum amount (including the previously-issued Restructuring Bonds) of $4.5 billion. Any additional issuance of restructuring bonds, whether issued by UDSA or by a new issuer, will be separately secured by distinct collateral pursuant to a new financing order and transaction documents.

Background Information on Duke Energy and Duke Energy Florida

Duke Energy is a publicly-traded utility company with electricity generation and transmission networks in the Carolinas, Florida, Ohio, Kentucky and Indiana. Duke Energy Florida ("**DEF**") is a subsidiary of Duke Energy and distributes power over much of central and north Florida. The Florida Public Service Commission (the "**Commission**") regulates DEF and other electric utilities in Florida (including municipal or investor-owned electric utility, and rural electric cooperative which owns, maintains, or operates an electric generation, transmission, or distribution system).

Summary of Legislative Provisions on Asset Securitization

In 2015, section 366.95 of the Florida Statutes is created to enable "financing for certain nuclear generating asset retirement or abandonment costs". This section includes asset securitization provisions to allow investor-owned electric utilities to set up a special-purpose vehicle ("**SPV**") to issue secured bonds to finance the utility's costs ("nuclear asset-recovery costs") associated with the "early retirement or abandonment of a nuclear generating asset unit". These provisions were likely introduced in response to the closing of Duke Energy's Crystal River nuclear plant in 2013. According to DEF, "[t]his process, called Asset Securitization, will save customers approximately $600 million as compared to traditional cost recovery methods."[1]

Subsection (1) sets out the definitions of some key terms used in the section. The definition of "Assignee" provides examples of different legal structures to set up the SPV, including corporation, limited liability company, trust, partnership or public authority. The definition of "utility" limits the scope of this section to "investor-owned electric utilities" by referring to the same definition in another section of the statute book. "Nuclear asset-recovery bonds" are issued by the utility or assignee, and secured by the "nuclear asset-recovery property", which is the property interest in the revenue stream arising from "nuclear asset-recovery charges".

Subsection (2) requires the utility to submit a petition to the Commission for a financing order before the nuclear asset-recovery bonds can be issued. The petition needs to demonstrate that securitization would result in cost savings or would avoid or mitigate rate impacts compared to the traditional method of cost recovery. Subsection (2) further requires the Commission to address specific areas in its financing order, including: (i) the amount of nuclear asset-recovery costs to be financed by the bonds and the period during which the charges can be imposed on customers; (ii) detailed fact findings on cost-effectiveness and rate impacts; (iii) a requirement that charges be nonbypassable and paid by all existing and future customers receiving transmission or distribution

[1] Duke Energy announcement, "Duke Energy Florida cuts rates for customers", February 8, 2016 <http://www.prnewswire.com/news-releases/duke-energy-florida-cuts-rates-for-customers-300216799.html>

services; and (iv) mechanisms for periodic adjustment in the nuclear asset-recovery charges.

Subsection (3) provides that the bonds are considered debt for the utility only for federal income tax purposes, and limits the Commission's power to impose certain requirements in the financing order.

Subsection (4) sets out specific requirements for utility bills, such as showing the nuclear asset-recovery charge as a separate line item on the utility bill.

Subsection (5) creates a property right in the nuclear asset-recovery charges, which exists even if the charges have not been billed and may be pledged to secure the nuclear asset-recovery bonds. The utility may create a wholly owned subsidiary (the SPV) for the limited purpose of "acquiring, owning, or administering nuclear asset-recovery property or issuing nuclear asset-recovery bonds under the financing order", which also protects the nuclear asset-recovery property from potential creditor claims. This subsection also provides priority rules for competing security interests in the nuclear asset-recovery property. Subsections (6) to (8) provides further guidance in connection with the transfer of nuclear asset-recovery property to an SPV.

Subsection (9) provides that the nuclear asset-recovery bonds are not debt of the state of Florida. An issue of such bonds does not obligate the state to levy any tax for its payment, although the state may provide bond guarantees or enhancements. Subsection (10) provides statutory authority for certain entities to invest in nuclear asset-recovery bonds. Subsection (11) provides a pledge from the state not to take actions to impair the value of the nuclear asset-recovery property. Subsections (12) to (15) include boilerplate provisions such as conflicts, severability and penalties for incompliance.

Duke Energy Florida's Financing Order and Bond Issuance

In November 2015, the Commission released Financing Order PSC-15-0537-FOF-EI to approve DEF's petition for the issuance of nuclear asset-recovery bonds in the amount of $1,283,012,000 plus financing costs. Under the financing order, DEF is authorized to impose a nuclear asset-recovery charge to repay the nuclear asset-recovery bonds and associated financing costs, which will be collected on a per-kWh basis from all applicable customer rate classes. The financing order authorizes DEF to impose the charge for a period not exceeding 276 months (23 years) from the issuance of the nuclear asset-recovery bond.

DEF created Duke Energy Florida Project Finance LLC for the issuance of of nuclear asset-recovery bonds in June 2016.

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

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CREDIT OPINION
18 February 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016A

Presale Report - Long Island Power Authority-Sponsored Securitization of Utility Cost Recovery Charge Assets

Capital Structure

Exhibit 1
Provisional (P) Ratings*

Series	Expected Amount	Tax Status	Interest Rate	Legal Maturity**	Provisional Ratings
2016A	[$381,730,000]	Tax-Exempt	Fixed	[12/15/2028]	(P) Aaa (sf)

The ratings address the expected loss posed to investors by the legal final maturity date. In Moody's opinion, the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the securitization. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors.
* Principal amounts and legal maturity dates are preliminary and subject to change
** Reflects the latest legal maturity date among the tranches in the series
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016, and Moody's Investors Service

Summary Rating Rationale

The Utility Debt Securitization Authority (the issuer) intends to issue Restructuring Bonds, Series 2016A. The bond issuance will enable the Long Island Power Authority (LIPA, Baa1 stable) to retire a portion of its outstanding debt. This will be the third utility cost recovery charge (UCRC) securitization that LIPA has sponsored since 2013. These bonds are backed by restructuring property which consists of, among other things, the right to impose usage-based restructuring charges on all current and future retail electric customers in LIPA's service area.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of LIPA's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 18 February 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

and diversity of the ratepayer base in LIPA's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the 2016A restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of Legislation and Financing Order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015 permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other UCRC securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to UCRC bondholders that it will not 1) take or permit any action that limits, alters or impairs the value of the restructuring property, or 2) except as required by the adjustment mechanism, reduce, alter or impair restructuring charges until the bonds have been repaid in full (the state pledge). In addition, the LIPA Reform Act and financing order contain the typical strong true-sale and security interest provisions.

LIPA's irrevocable financing order authorizes the creation of restructuring property, which grants the issuer the irrevocable right to impose, bill and collect irrevocable, non-bypassable restructuring charges based on electricity usage from all of LIPA's existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

The financing order authorizes LIPA to recover the costs of retiring certain of its outstanding debt and the issuer to recover the costs of issuing, supporting and servicing the bonds. The issuer will recover these costs by collecting restructuring charges until the bonds are repaid in full, without any specified time limit.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually, and if necessary, semiannually (and quarterly after the last scheduled maturity date of the bonds of any series), in each case to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time without limitation as to frequency, if the servicer deems necessary to ensure timely bond payments. New to the 2016A transaction, the servicer may elect to perform an additional voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). Also, the timing of the mid-year and annual true-ups has changed to help smooth charges over the course of the year.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in LIPA's service area is a credit strength. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (89%) and commercial customers (10%). Unlike most other UCRC securitizations, the service area includes very few industrial customers, which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Credit Challenges

Challenges to LIPA Reform Act and Financing Order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the securitizable restructuring property; however we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the LIPA Reform Act. Therefore, the only way to repeal or amend the LIPA Reform Act, or for LIPA to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws

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prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

Potential for Insufficient Collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration and self-generation. PSEG-LI's estimates of market demand, energy prices and growth within LIPA's service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur annually, semiannually and on an interim basis as needed.

Relatively High Restructuring Charge: LIPA expects the securitization's initial restructuring charge to represent around [0.79%] of the total monthly bill that an average 1,000 kilowatt hour (kWh) residential customer in LIPA's service area will receive as of June 1, 2016. The initial restructuring charge for the 2016A transaction, combined with the current restructuring charge for the 2013 and 2015 transactions, is expected to represent approximately [6.91%] of a typical residential customer's bill, and is relatively high compared to other utility cost recovery transactions. This concern is mitigated by LIPA's securitization offset rider, which reduces LIPA's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Exhibit 2

Asset Characteristics

Assets:	Restructuring property consisting of the issuer's irrevocable right to impose, charge and collect irrevocable, non-bypassable usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up adjustment mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full
Service Area:	Approximately 1.1 million customers in Nassau and Suffolk counties[1] and the Rockaway Peninsula

1. Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	[$381,730,000]1
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Collection Accounts and Debt Service Reserve Account
Sponsor/Seller/Initial Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority, a special purpose corporate municipal instrumentality of the State of New York
Operations Agent:	PSEG-Long Island
Trustee:	Bank of New York Mellon (Aa1/Aa2 stable, a1) 2

1. Preliminary and subject to change based on market conditions
2. The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Offering Statement dated February 18, 2016

Assets Overview

The collateral for this pool is the restructuring property consisting of the irrevocable right to impose, charge and collect non-bypassable, usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow LIPA to finance the retirement of a portion of its outstanding debt through the issuer's issuance of restructuring bonds, resulting in savings to LIPA's customers on a net present value basis. The securitization law gives LIPA the right to impose restructuring charges, which are the key asset of this securitization.

Prior to the legislature's amendment of the securitization law on March 26, 2015, the law permitted only one issuance of restructuring bonds by the issuer, and that issuance took place in December 2013 pursuant to Financing Order No. 1. The amended securitization law permits LIPA's Board of Trustees to adopt additional financing orders to, among other things, authorize the creation of additional restructuring property and the issuance of additional restructuring bonds in an aggregate additional amount not to exceed $4.5 billion (inclusive of the $2,022,324,000 previously issued 2013 restructuring bonds and the $1,002,100,000 previously issued 2015 restructuring bonds). After the 2016A issuance, LIPA will have authority to issue an additional [$1,093,846,000] billion of restructuring bonds under the securitization law.

Specifically, the securitization law coupled with the financing order authorizes LIPA to sponsor multiple bond issuances to finance the recovery of the costs of retiring a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds.

Similar to other UCRC securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that will be incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

Specifically, the State of New York pledges to and agrees with the bondholders, the issuer and LIPA that the State will not in any way: 1) take or permit any action that limits, alters or impairs the value of the restructuring property; or 2) except as required by the adjustment mechanism authorized by the securitization law and set forth in the financing order, reduce, alter or impair restructuring charges that are imposed, collected and remitted for the benefit of the bondholders until all principal of and interest on the bonds and all ongoing financing costs have been repaid in full.

The state pledge provides protection to bondholders; to the extent LIPA or the State of New York have obligations under the financing order, the LIPA Reform Act provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to change the securitization law would be through a legislative action which would be subject to the state pledge.

The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims.

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

Hawkins Delafield & Wood LLP, LIPA's special counsel, will provide a legal opinion prior to securitization closing to the effect that the bondholders (or the trustee acting on their behalf) could successfully challenge under the contracts clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Hawkins Delafield & Wood LLP, LIPA's bond counsel, will provide a legal opinion prior to securitization closing to the effect that under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The Financing Order

The securitization law authorizes LIPA's securitization program, while a separate financing order implements each issuance of bonds under the program.

On June 26, 2015, LIPA Trustees adopted Financing Order No. 3 (the financing order), together with Financing Order No. 2 and Financing Order No. 4 and on July 15, 2015, the New York Public Authorities Control Board approved them. On August 14, 2015, they became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, and the 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property.

The issuer is issuing the 2016A restructuring bonds pursuant to Financing Order No. 3, which authorizes: 1) the creation of the 2016A restructuring property; 2) LIPA to sell the 2016A restructuring property to the issuer under the financing order (the 2016A restructuring property is created simultaneously with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the 2016A restructuring property from LIPA and pay upfront financing costs; and 6) LIPA to use the proceeds of the sale of the 2016A restructuring property to retire a portion of its outstanding debt

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with LIPA setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of LIPA to review and approve the issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The 2016A Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and non-bypassable restructuring charges from all of LIPA's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism to ensure the expected collection of amounts sufficient to pay the amounts specified above on time. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from LIPA's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the Public Service Commission.

Restructuring Charges are Non-Bypassable

The securitization law provides that the restructuring charges are non-bypassable. "Non-bypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (LIPA's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if LIPA no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

Self-Generation in the Service Area is Low

Self-generation, which primarily includes solar and wind, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Self-generation is currently very small in the service area at roughly 0.3% of energy sales. LIPA forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. Certain customers that self-generate will only be responsible for paying restructuring charges based upon their "net-billed" consumption.

Municipalization

Municipalization, or the transfer of the T&D system assets to a municipal owner, would not affect restructuring charge collections because the customers are required to pay the restructuring charges even if the T&D system assets are no longer owned by LIPA. Since 1998, no municipalizations have occurred.

The Service Area

LIPA provides electric transmission and distribution services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which LIPA provided electric transmission and distribution services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. Of these, approximately 89.3% were residential, 10.2% commercial (with very few industrial customers), 0.5% street lighting and 0.0% other public authorities; the average number of customers has been fairly stable over the last 10 years, with very small year-over-year changes ranging from -0.2% to 0.7%. Retail electric usage was 48.2% residential, 48.8% commercial, 0.7% street lighting and 2.2% other public authorities.

In the year ending December 31, 2015, LIPA's largest customer, the Long Island Rail Road, accounted for less than 2.0% of LIPA's total sales, and LIPA's top 10 customers accounted for approximately 7.0% of LIPA's total sales.

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs (the revenue requirement)

3. mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
5. more frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. after the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Under the financing order, the adjustments are to be based on actual charge collections and the servicer's updated assumptions for projected future charge collections, projected uncollectibles and loss in collection of billed charges, and future payments and expenses relating to the restructuring property and the bonds.

No Third-Party Billing/Collection of Charges

Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor regulator will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

Assets Analysis

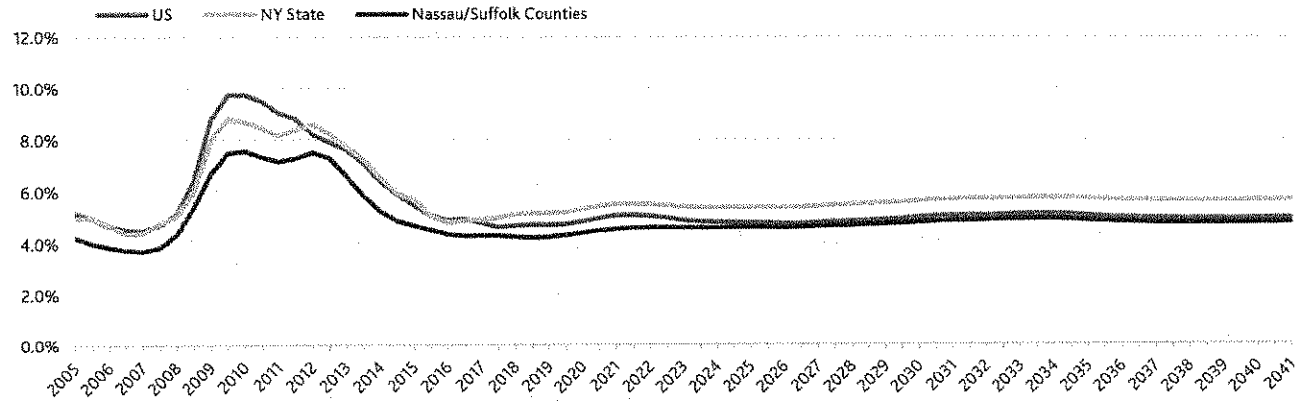
Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, 19 colleges and universities and core research institutions, such as Brookhaven National Laboratory, Cold Spring Harbor Laboratory, and the technology and science developmental centers at Stony Brook and Farmingdale Universities that specialize in the areas of biotechnology, computer sciences, wireless and internet technologies, and energy.

Long Island's median household income is substantially above that of New York and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $98,401 and $88,323, respectively, considerably higher than the $58,687 for New York and the $53,482 for the US. According to LIPA, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 4 shows that the Nassau-Suffolk unemployment rate is lower than that of the US, and we forecast the rate will remain lower.

Exhibit 4
Unemployment Rate*



* Data does not include the Rockaways, Queens, which is also part of the service area.
Source: US Bureau of Labor Statistics and Moody's Analytics

Exhibit 5 shows Moody's Analytics' forecasted average year-over-year changes in various economic stability measures for the service area, compared with New York and the US. The data include Nassau and Suffolk counties, but exclude the Rockaways in Queens, NY. The exhibit shows that forecasted population growth will be relatively flat.

Exhibit 5
Forecasted Average Year-Over-Year Changes in Population and Economic Stability Measures
(Data for 2016-2041, the scheduled maturity date of the bonds)

	Nassau-Suffolk *	New York	US
Population	0.1%	0.1%	0.7%
Households	0.3%	0.4%	0.9%
GDP (Chained 2009 $)	1.6%	1.4%	2.0%
Per Capita Income	3.3%	3.6%	3.6%
Employment (non-farm payroll)	0.5%	0.5%	0.8%

* Does not include the Rockaways, Queens, which is part of the service area
Source: Moody's Analytics

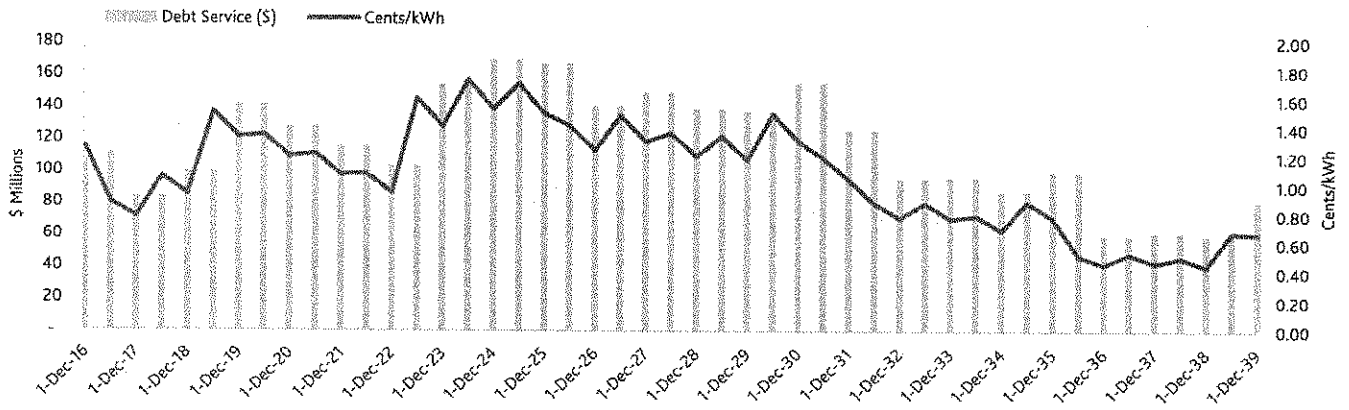
Remote Risk of Severe Ratepayer Base Declines

The securitization's performance is exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's diverse ratepayer base.

LIPA expects the combined initial restructuring charge for the 2013, 2015 and 2016A transactions to be around [6.91%] of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 1, 2016, which is higher than most other UCRC securitizations we rate. The [6.91%] is preliminary and subject to change based on market conditions.

Exhibit 6 shows LIPA's expected restructuring charge, which is the same for all customer classes, and annual debt service of the bonds over the securitization's life. The exhibit shows that the restructuring charge will vary over time to cover the unlevel debt service of the bonds, which mirrors the unlevel debt service of the retired LIPA bonds.

Exhibit 6
Restructuring Charge (Cents/kWh) and Annual Debt Service*



* Preliminary and subject to change based on market conditions.
Source: LIPA; Moody's calculations

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a typical residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand.

Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We looked at three scenarios. In our base case, we assumed 1) electricity consumption as per LIPA's projections, 2) annual net charge-offs as per LIPA's projections, 3) collection curve as per LIPA's projections and 4) actual servicing fee and other expenses (Scenario A).

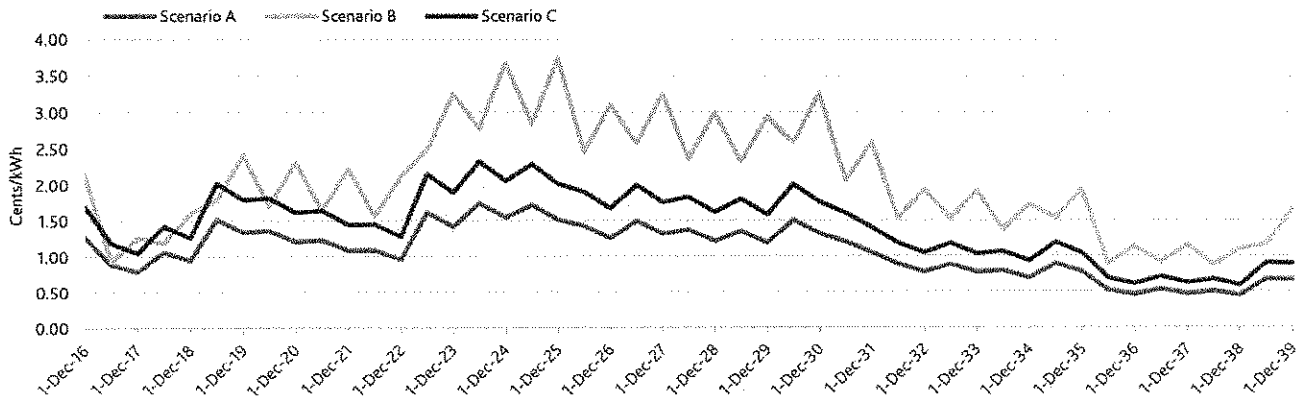
In our first stress scenario, we assumed 1) electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers, 2) annual net charge-offs are the same as in base case, 3) collection curve is the same as in base case, 4) loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year and 4) replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case (Scenario B).

In our second stress scenario, we assumed 1) electricity consumption is reduced by 25% permanently against the first year base case projection, 2) annual net charge-offs the same as in base case, 3) collection curve is the same as in base case and 4) servicing fee and all other fees the same as in base case (Scenario C).

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 7 shows the projected restructuring charges for customers in cents per kWh, and Exhibit 8 shows the projected restructuring charge as a percentage of the typical residential customer's total bill assuming monthly usage of 1,000 kWh over the securitization's life.

Exhibit 7

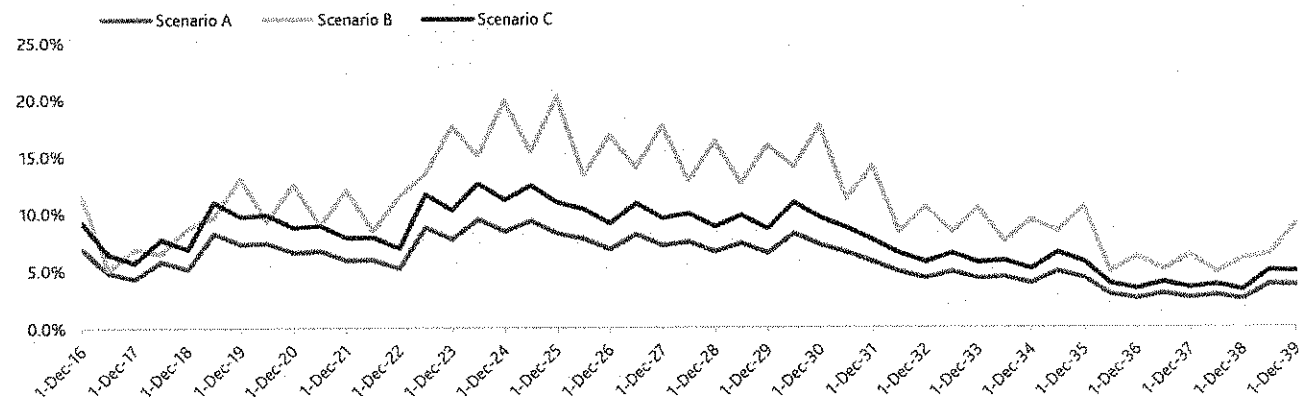
Restructuring Charge (Cents/kWh)



Source: LIPA and the servicers; Moody's calculations

Exhibit 8

Restructuring Charge as a Percentage of a Typical Residential Customer's Total Bill



Source: LIPA and the servicers; Moody's calculations

Forecasting Electricity Consumption

The company monitors the accuracy of each forecast by conducting variance analysis on a monthly basis taking into account weather impacts on kWh sales and deviations from forecast within the customer count. LIPA factors the impact of weather and the growth in self generation, energy efficiencies and the use of electric vehicles into its forecasts.

Exhibit 9 shows LIPA's annual forecast variance for ultimate electric delivery by customer class.

Exhibit 9

Annual Forecast Variance for Ultimate Electric Delivery (MWh)

	2011	2012	2013	2014	2015
Residential	4.3%	-2.4%	-2.7%	-4.3%	0.5%
Commercial	-1.0%	-3.6%	-2.4%	-1.7%	-2.1%
Street Lighting	0.2%	-2.2%	-4.4%	1.7%	-3.8%
Other Public Authorities	5.5%	-13.6%	-4.2%	3.1%	2.5%
Total	1.6%	-3.2%	-2.6%	-2.8%	-0.8%

Note: Negative variance means that the actual electric delivery is lower than the forecasted electric delivery.
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Additional Assets Analysis

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, LIPA or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

PSEG LI will perform, and is capable of performing, LIPA's key servicing duties, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among other things. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

PSEG is a publicly traded energy and energy services company. As of September 30, 2015, it had total assets of approximately $36.5 billion, latest twelve months revenues of approximately $10.9 billion; and employed approximately 12,700 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company (PSE&G), New Jersey's largest regulated electric and gas transmission and distribution utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets, pursuant to the securitization documents.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Loss Experience

Exhibit 10 shows the annual net charge-offs for LIPA, including net charge-offs of customers as part of LIPA's annual charge-off reconciliation process.

Exhibit 10

Net Charge-Offs as a Percentage of Total Billed Retail Electricity Service Revenues

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Billed Electric Revenues ($000)	3,620,532	3,413,091	3,834,255	3,753,765	3,572,133
Net Charge-Offs ($000)	24,753	19,750	20,969	24,659	23,948
Percentage of Billed Revenue	0.68%	0.58%	0.55%	0.66%	0.67%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Days Sales Outstanding

Exhibit 11 shows the average number of days that LIPA's bills remained outstanding during each of the calendar years below.

Exhibit 11

Average Days Sales Outstanding

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Average Days Sales Outstanding	38.55	39.23	39.40	37.13	36.78

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Delinquency Experience

Exhibit 12 shows the delinquency experience of LIPA during each of the calendar years below.

Exhibit 12
Average Monthly Delinquencies of Total Annual Billed Retail Electricity Delivery Service Revenues

	2011	2012	2013	2014	2015
30-59 days	$ 52,766	$ 50,348	$ 59,196	$49,980	$42,775
60-89 days	$ 28,940	$ 28,018	$ 32,104	$24,937	$21,223
90+ days	$108,208	$116,791	$135,828	$86,419	$87,580

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Securitization Structure Overview

LIPA intends to issue one series of tax-exempt, fixed rate bonds, Series 2016A, secured by the collateral on a pari passu basis. Some of the Series 2016A Bonds will be serial bonds, while others will be term bonds, with the term bonds subject to mandatory sinking fund payments. The issuer will have the option to redeem the Series 2016A Bonds with a legal final maturity date on or after [ ], in whole or in part and in any order, on and after [ ]. *All dates in this paragraph will be determined prior to closing.*

Securitization Structure Description

Bond Structure

The issuer will make payments on the bonds semiannually, on June 15 and December 15 of each year, beginning in December 2016. Interest will be paid pro rata among the tranches.

All tranches of bonds will be paid pro rata if the bonds are accelerated following an event of default under the indenture. Partial payments of any scheduled payments will be allocated pro rata between tranches of bonds with the same legal final maturity date.

Optional Redemption

The issuer will not have the option to redeem the Series 2016A Bonds with a final maturity date prior to [ ]. The issuer will have the option to redeem the Series 2016A Bonds with a final maturity date on or after [ ], in whole or in part and in any order, on and after [ ], at a redemption price of 100% of the principal amount of the Series 2016A Bonds to be redeemed, plus accrued interest to the redemption date. *All dates in this paragraph will be determined prior to closing.*

Indenture Accounts

The trustee will hold the collection account in its name and will deposit the restructuring charge collections and all other amounts it receives with respect to the collateral. The collection account will consist of five subaccounts: the general subaccount, the excess funds subaccount, the operating reserve subaccount, the debt service reserve subaccount and the upfront financing cost subaccount.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other ongoing financing costs to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;

6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;
7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates.

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

The annual true-up adjustment will be calculated to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment.

Events of Default

The Events of Default under the indenture are:

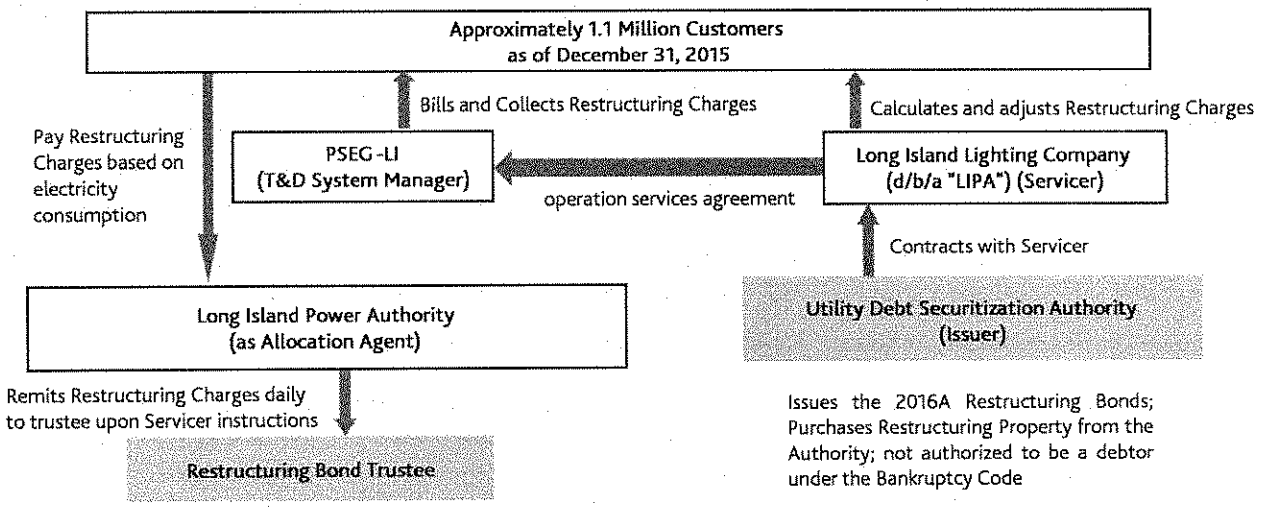
1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period); or
5. an action violating the financing order or state pledge.

Securitization Structure Analysis

Securitization Parties and Responsibilities

Exhibit 13 provides a general summary of the key securitization parties, their roles and their various relationships to the other parties.

Exhibit 13
Securitization Parties and Responsibilities

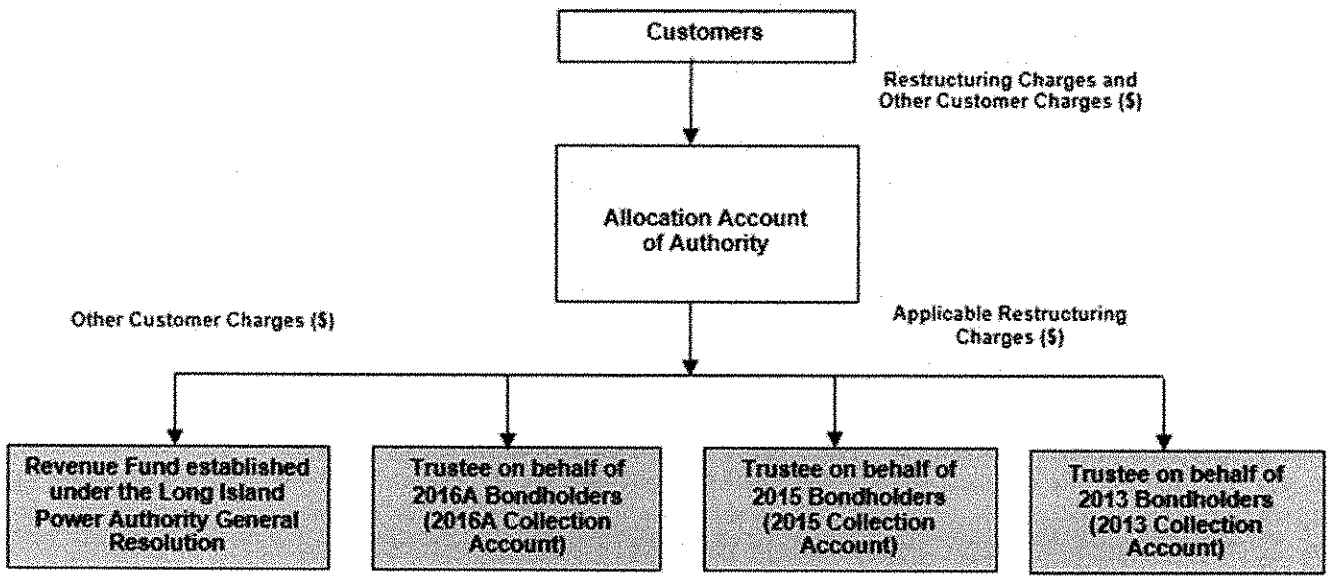


Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Flow of Funds

Exhibit 14 shows a general summary of the securitization's flow of funds: PSEG-LI will bill and collect the restructuring charges from LIPA's customers on behalf of the servicer. The servicer will be required to cause all customer payments (including restructuring charge collections) to be deposited into the allocation account, which LIPA established to hold all payments until the checks clear. Initially, the account will be held by J.P. Morgan Chase Bank. If customers make payments directly to the servicer instead of to the allocation account, the servicer must remit such payments to the allocation account within two business days' receipt by the servicer or LIPA. LIPA, as allocation agent, will control and administer the allocation account for the benefit of the trustee for the holders of the bonds and the trustee for the holders of LIPA bonds. On each business day, the allocation agent must transfer to the collection account the amount of restructuring charge collections that the servicer estimates to have been received and deposited into the allocation account on such day.

Exhibit 14
Flow of Funds



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Legal Structure

The primary steps of the securitization are as follows:

1. The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under chapter 9 or any other provision of the Bankruptcy Code. The securitization law formed the issuer solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.
2. The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from LIPA and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.
3. LIPA will use the proceeds from the sale of its restructuring property to retire certain of its outstanding debt. LIPA will act as the servicer of the restructuring property under a servicing agreement with the issuer and as the issuer's administrator under an administration agreement with the issuer. PSEG-LI will act as LIPA's service provider and will perform LIPA's key servicing duties under an operations servicing agreement with LIPA.

Sponsor and Seller

LIPA will be the securitization's sponsor and the seller of the restructuring property. LIPA is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a chapter 9 debtor pursuant to its enabling legislation.

LIPA took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of LIPA through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

LIPA is governed by a Board of Trustees (LIPA Trustees) and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. LIPA is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

Pursuant to LILCO's organizational documents, LIPA conducts and manages LILCO's business and affairs. Accordingly, LILCO is controlled by LIPA.

LIPA and LILCO are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LILCO conducts the electric business in the service area and is responsible for providing service to customers in the service area. LIPA and LILCO are also parties to an administrative services agreement pursuant to which LIPA provides personnel, personnel-related services and other services necessary for LILCO to provide electric service in the service area.

To assist LIPA (acting through LILCO) in providing electric service in the service area, LIPA and LILCO have entered into operating agreements to provide them with the operating personnel and a significant portion of the power supply resources necessary for LILCO to continue to provide such electric service. From 1998 through 2013, National Grid plc, certain of its subsidiaries (National Grid subs) or their predecessors performed most such operations.

Beginning in 1998, a National Grid sub was the manager of LILCO's electric T&D system under a management services agreement which expired at the end of 2013. Beginning January 2014, PSEG-LI assumed the role from the National Grid sub. T&D system management services include, among other functions, the day-to-day operation and maintenance of the T&D system, customer service, billing and collection, meter reading and forecasting energy consumption.

In July 2013, New York Governor Andrew Cuomo signed the LIPA Reform Act, codified as Chapter 173, Laws of New York, into law. On March 30, 2015, the New York State Assembly and Senate adopted Chapter 58 of the Laws of New York, 2015, which amended the LIPA Reform Act to authorize the issuer to issue additional restructuring bonds. On April 13, 2015, the Governor signed Chapter 58 into law. On May 13, 2015, the time for filing any challenges to the LIPA Reform Act, as amended, expired and no such challenges were filed.

The LIPA Reform Act effectively shifted the major operational and policy-making responsibilities for the T&D system, including significant responsibilities relating to capital expenditures, budgets and emergency response, from LIPA to PSEG-LI. PSEG-LI's scope of services and LIPA's reserved rights have been adjusted to reflect the shift in operations, management and policy making responsibilities while enhancing LIPA's oversight rights. The LIPA Reform Act also requires that staffing be kept at levels only necessary to ensure that LIPA is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and to oversee the activities of PSEG-LI.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

MOODY'S INVESTORS SERVICE

CREDIT OPINION
29 July 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016B

Long Island Power Authority-Sponsored Utility Cost Recovery Bonds

Capital Structure

Exhibit 1

Provisional (P) Ratings*

Series	Provisonal Rating	Expected Amount	Tax Status	Coupon	Payment Frequency	Expected Maturity	Legal Final Maturity**
Series 2016B	(P)Aaa (sf)	$475,000,000	Tax Exempt	Fixed	Semi-annual	12/15/2033	12/15/2035

The ratings address the expected loss posed to investors by the legal final maturity. In our opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Our ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.

* Principal amounts and legal maturity dates are preliminary and subject to change

** Reflects the latest legal maturity date among the tranches in the series

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Summary Rating Rationale

We have assigned provisional ratings to the single series of bonds (Series 2016B bonds, or the bonds) that Utility Debt Securitization Authority (the issuer) will issue. The Long Island Power Authority ("the Authority", Baa1 stable), which is a corporate municipal instrumentality and a political subdivision of the State of New York, is sponsoring the transaction. The Authority wholly owns the Long Island Lighting Company (doing business as "LIPA", the servicer), which provides electric transmission and distribution services in most of Nassau and Suffolk counties and a portion of Queens county. New York State legislation formed the issuer to securitize a special charge (the restructuring charge) imposed on the Authority's customers' utility bills. The Authority will use the proceeds of the securitization to retire a portion of its outstanding debt. The Series 2016B bonds will be the fourth utility cost recovery bonds sponsored by the Authority since 2013.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 28 July 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

The primary collateral backing the Series 2016B bonds is the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area (the restructuring property). New York State legislation, along with an irrevocable financing order adopted by the Authority on June 26, 2015, authorizes the creation of the restructuring property.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of the Authority's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability and diversity of the ratepayer base in the Authority's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of legislation and financing order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015, permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other utility cost recovery charge securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order (the state pledge). In addition, the securitization and financing order contain the typical true-sale and security interest provisions.

The Authority's irrevocable financing order authorizes the Authority to recover specified costs of retiring its corporate debt by collecting restructuring charges. The restructuring property grants the issuer the irrevocable right to impose, bill and collect irrevocable, nonbypassable restructuring charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. Nonbypassable refers to the requirement that the charges be levied on all of the Authority's existing and future retail electric customers receiving transmission and distribution services in its service area, including customers of any Authority successor or assignee.

True-up adjustment mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually and, if necessary, semiannually, to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments at any time if the servicer deems necessary to ensure timely bond payments. The servicer may also elect to perform a voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). This voluntary mid-year adjustment helps reduce the volatility of the restructuring charge to customers. The inclusion of an operating reserve account and a debt service account provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between true-ups.

Affluent ratepayer base: The size, economic stability and diversity of the ratepayer base in the Authority's service area are credit strengths. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (54% by revenue) and commercial customers (43% by revenue).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Experienced servicer: LIPA has considerable prior servicing experience with restructuring charges, including acting as servicer for the Authority's three outstanding utility cost recovery charge securitizations.

Although LIPA is the named servicer for this securitization, PSEG Long Island LLC (PSEG-LI, unrated), a subsidiary of Public Service Enterprise Group Incorporated (Baa2, positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others. PSEG-LI currently performs these same functions for the three outstanding utility cost recovery charge securitizations sponsored by the Authority. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

Credit Challenges

Challenges to securitization law and financing order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the restructuring property. However, we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for the Authority to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered. Several past challenges to securitization laws such as this in other jurisdictions have been unsuccessful.

Potential for insufficient collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. The Authority's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, by which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments are required to occur annually and can occur semi-annually and at the discretion of the servicer on an interim basis as needed.

Relatively high restructuring charge: The Authority expects the securitization's initial restructuring charge to represent around 2.55% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in the Authority's service area will receive as of June 15, 2017. The initial restructuring charge for the 2016B transaction, combined with the current restructuring charge for the 2013, 2015 and 2016A transactions, is expected to represent approximately 7.8% of a 1,000 kWh residential customer's bill. This percentage charge is relatively high compared to charges in other utility cost recovery bond transactions. For context, the three most recent utility cost recovery bond issuances we rated, Duke Energy Florida Project Finance, LLC, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 2.5%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively. A high cumulative recovery charge could incentivize a legal challenge to the restructuring charges or the securitization law, or could increase political pressure to rescind or change the securitization law through legislation. This concern is mitigated by the Authority's securitization offset rider, which reduces the Authority's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Restructuring property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from the Authority or its successors or assignees
Service Area:	The Authority's service area covers approximately 1.1 million residential, commercial customers in Nassau and Suffolk counties* and the Rockaway Peninsula

*Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	$475,000,000*
Structure:	Discrete trust
Credit Enhancement:	Mandatory uncapped true-up mechanism; operating reserve account (0.5%); debt service reserve account (1.5%)
Transaction Parties	
Sponsor/Depositor/Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority
Transmission and Distribution System Manager:	PSEG Long Island LLC (unrated)
Trustee:	The Bank of New York Mellon Trust Company, National Association (Aa1/Aa2 stable, a1)**

*Preliminary and subject to change based on market conditions
**The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Overview

The collateral for this pool is the restructuring property, consisting of the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area.

The bonds are also secured by funds on deposit in the collection account, including the debt service reserve subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds with respect to the pledged collateral.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow the Authority to finance the retirement of a portion of its outstanding debt through the issuance of restructuring bonds by the issuer, resulting in savings to the Authority's customers on a net present value basis. The securitization law gives the Authority the right to impose restructuring charges, which is the key asset backing this securitization.

The securitization law, coupled with the adoption of additional financing orders, authorizes the Authority to create additional restructuring property as collateral for the issuance of bonds. The Authority will use this issuance to retire a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds. The current financing order allows for an aggregate amount not to exceed $4.5 billion (inclusive of the previously-issued bonds: $2,022,324,000 in 2013, $1,002,115,100 in 2015 and $636,770,000 in 2016). After the Series 2016B issuance, the issuer has capacity issue an additional $363.8 million of restructuring bonds under the initial authorization.

Similar to other utility cost recovery charge securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that is incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

The Financing Order

On June 26, 2015, the Authority adopted Financing Order No. 4 (the financing order), together with Financing Order No. 2 and Financing Order No. 3; all of which were approved by the New York Public Authorities Control Board on July 15, 2015. On August 14, 2015, the financing orders became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the Series 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, the Series 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property and the Series 2016A restructuring bonds that the issuer issued pursuant to Financing Order No. 3 are secured by the 2016A restructuring property.

The issuer is issuing the bonds pursuant to the financing order, which authorizes: 1) the creation of the restructuring property; 2) the Authority to sell the restructuring property to the issuer under the financing order (the restructuring property is created simultaneous with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the restructuring property from the Authority and pay upfront financing costs; and 6) the Authority to use the proceeds of the sale of the restructuring property to retire a portion of its outstanding debt.

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with the Authority setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of the Authority to review and approve the

issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The State Pledge

The securitization law includes a pledge from the State of New York to the bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order.

Any action of the New York legislature adversely affecting the restructuring charges or the ability to impose, charge or collect the restructuring charges would likely require the State of New York to pay just compensation under the "takings clause" of the United States and State of New York Constitutions.

The state pledge provides protection to bondholders. To the extent the Authority or the State of New York have obligations under the financing order (e.g. to file for true-up adjustments), the securitization law provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

The Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and nonbypassable restructuring charges from all of the Authority's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism. This is designed to ensure the expected collection of amounts sufficient to timely pay the amounts specified above. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from the Authority's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the New York Public Service Commission.

The restructuring charges are nonbypassable; "nonbypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (the Authority's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if the Authority no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

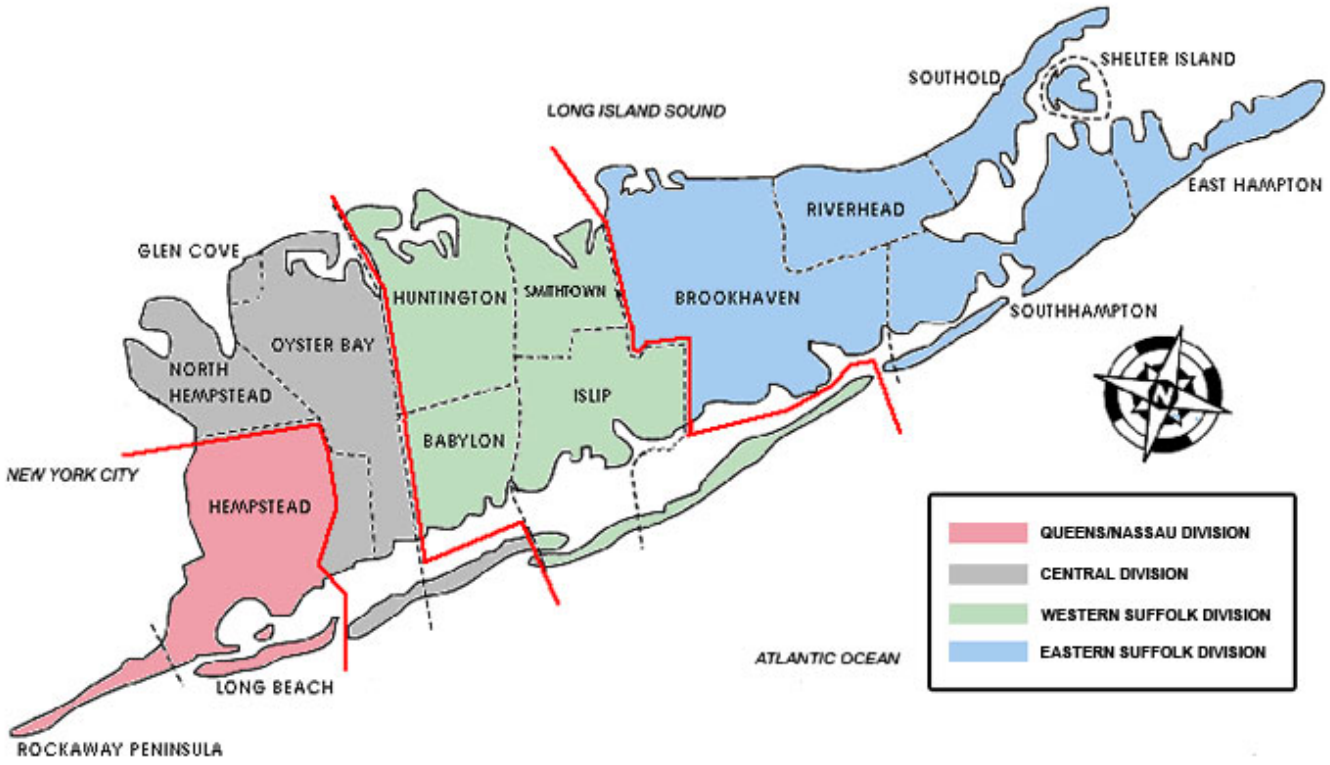
The Service Area

The Authority provides electric T&D services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which the Authority provided electric T&D services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. In 2015, retail electric usage was 54.4% residential, 43.5% commercial, 0.7% street lighting and 1.5% other public authorities. Exhibit 4 below shows the service area.

Exhibit 4
LIPA Service Area



Source: PSEG-LI website

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. Initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. Standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs
3. Mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. Voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

5. More frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. After the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, the Authority, or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

Although LIPA is the named servicer for this securitization, PSEG-LI, a subsidiary of Public Service Enterprise Group Incorporated (PSEG, Baa2 positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting the restructuring charges, meter reading and forecasting electricity usage, among others. PSEG is a publicly traded energy and energy services company. As of December 31, 2015, it had total assets of approximately $37.5 billion, last twelve months revenues of approximately $10.4 billion; and employed approximately 13,000 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company, New Jersey's largest regulated electric and gas T&D utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets.

Billing

PSEG-LI will perform LIPA's duties of billing and collecting the restructuring charges, meter reading and forecasting electricity usage. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

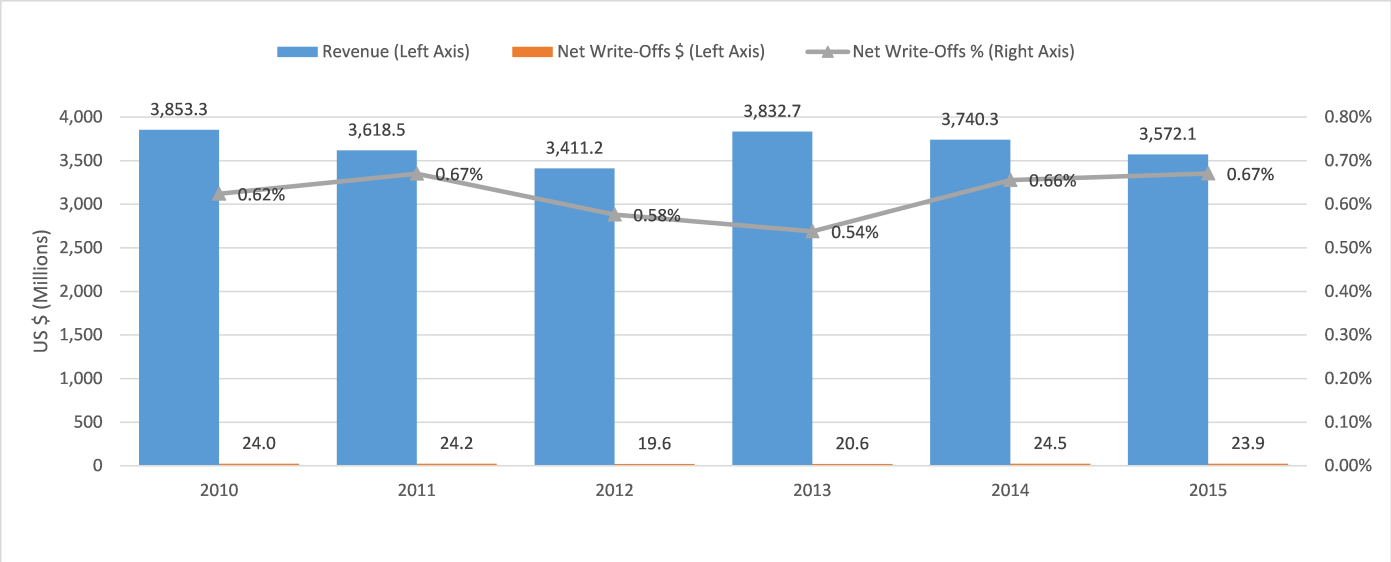
Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor servicer, and any owner of the T&D system assets will take steps to ensure nonbypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor servicer will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Exhibit 5 below shows net write-offs since 2010, which have ranged from a low of 54bps of billed revenue in 2013 to a peak of 67bps in 2011 and 2015.

Exhibit 5

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Exhibit 6 below shows LIPA customer delinquency data since 2010.

Exhibit 6

Average Monthly Delinquencies as a Percentage of Total Billed Revenues

	2010	2011	2012	2013	2014	2015
30-59 days	1.40%	1.46%	1.48%	1.54%	1.34%	1.20%
60-89 days	0.73%	0.80%	0.82%	0.84%	0.67%	0.59%
90+ days	2.43%	2.82%	3.42%	3.54%	2.31%	2.46%
Total	4.56%	5.08%	5.72%	5.93%	4.31%	4.25%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Analysis

Legal Analysis

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

New York does not have a referendum or initiative process by which the securitization law may be challenged. Therefore, the only way for the securitization law to be changed would be through a legislative action which would be subject to the state pledge.

Bondholders (or the trustee acting on their behalf) could challenge under the Contract Clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would likely be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The financing order provides that the restructuring property may be pledged to secure the payment of the bonds, financing costs, and other amounts owed. The securitization law provides that a valid and enforceable security interest in the restructuring propery will attach and be perfected at the time the pledge is made. The lien and security interest attach without any physical delivery of collateral or other act. The securitization law provides that the pledge is continuously perfected and has priority over any other lien created by the operation of law or otherwise that may be created subsequently.

Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, more than 20 colleges and universities and core research institutions.

Long Island's median household income is substantially above that of New York State and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $99,035 and $86,266, respectively, considerably higher than the $58,878 for New York State and the $54,562 for the US. According to the Authority, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 7 below shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 7
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	51.5%	52.8%	52.2%	52.4%	53.2%	53.2%	54.1%	53.8%	54.2%	54.4%	53.4%	54.4%
Commercial	46.6%	45.1%	45.7%	45.4%	44.5%	44.5%	43.8%	43.9%	43.7%	44.6%	44.0%	43.5%
Street Lighting	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	1.1%	0.7%
Other Public Authorities	1.1%	1.4%	1.3%	1.4%	1.5%	1.5%	1.3%	1.5%	1.4%	0.3%	1.5%	1.5%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

For the twelve months ending on June 30, 2016, the ten largest retail electric customers represented approximately 5.7% of the Authority's retail kilowatt-hour sales resulting in 4.8% of revenues. As of the closing date, no customer or group of related commercial is exempt from paying the restructuring charges. Exhibit 8 below shows the energy usage and revenue from the top 10 commercial customers.

Exhibit 8
Top 10 LIPA Commercial Customers

	Industry	Energy Usage (GWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	State Public Transportation	303.8	1.52%	$45,428,220	1.32%
2	Telecommunications	145.7	0.73%	$22,870,878	0.67%
3	Nas/Suf County Govt Twnsps	132.6	0.67%	$20,800,037	0.61%
4	Water Districts	122.7	0.62%	$20,598,940	0.60%
5	Health Services-Hospitals	120.0	0.60%	$17,580,632	0.51%
6	Retail Food	102.6	0.51%	$16,725,102	0.49%
7	Real Estate/Developers	66.9	0.34%	$5,284,931	0.15%
8	Nassau Universities	51.0	0.26%	$7,354,337	0.21%
9	Manufacturing	43.7	0.22%	$4,489,759	0.13%
10	Retail Non-Food	36.4	0.18%	$3,726,650	0.11%
	Total	**1,125**	**5.65%**	**164,859,486**	**4.81%**

Source: Utility Debt Securitization Authority

Remote Risk of Severe Ratepayer Base Declines

The Series 2016B bonds are exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's stable ratepayer base. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Customers that self-generate will only be responsible for paying restructuring charges based upon their net-billed consumption. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The restructuring charge will be recoverable from all customers taking T&D service. As of July 29, 2013, the securitization law defines the service area to include two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. Thus, the service area is fixed by the legislation. If the service area expands in the future, the new customers would be subject to the restructuring charge on a going-forward basis.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges. Moreover, municipalization would not affect restructuring charge collections since a successor and its customers will be subject to the restructuring charges, even if the T&D system assets are no longer owned by the Authority. Since 1998, no municipalizations have occurred in the service area.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact the Authority's operations, temporarily interrupting transmission, distribution and consumption of electricity, hence reducing the collections of restructuring charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the Authority's service area, which could cause the per-kWh restructuring charge to be greater than expected.

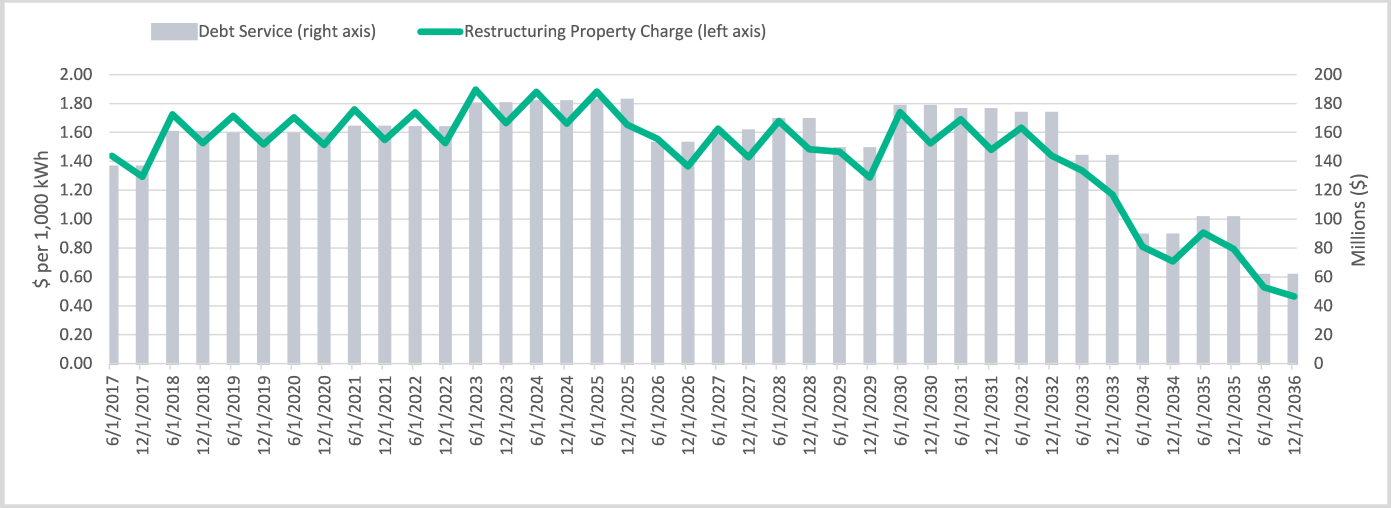
Forecasting Electricity Consumption

The Authority's internal company forecasts are used for projections of electricity price and weather conditions. The forecast incorporates customer usage, delinquencies and write-offs, among other inputs.

The Authority assesses the restructuring charges based on its forecasts of customer usage. The amount and the rate of restructuring charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs.

Exhibit 9 below shows the forecasted restructuring charge per 1,000 kWh and scheduled debt service payments.

Exhibit 9
Restructuring Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: Utility Debt Securitization Authority; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Additionally, there may be insufficient funds if the servicer inaccurately forecasts electricity consumption or uses inaccurate customer delinquency or charge-off data when setting or adjusting the 2016B restructuring charges. We view this risk as remote, as the maximum forecast variance since 2011 has been less than 6% per customer category, as shown in Exhibit 10.

Exhibit 10
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	4.31%	-2.37%	-2.69%	-4.28%	0.51%
Commercial	-1.00%	-3.59%	-2.39%	-1.70%	-2.07%
Street Lighting	0.17%	-2.19%	-4.44%	1.71%	-3.81%
Other Government	5.49%	-13.64%	-4.20%	3.13%	2.49%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm that the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the restructuring charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the restructuring charge, both in absolute terms and as a percentage of the customer's energy bill. In our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the restructuring charge is as high as 22.74%, higher than most other utility cost recovery charge securitizations. This concern is mitigated by the Authority's securitization offset rider, which reduces the delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

The Authority expects the combined initial restructuring charge for the 2013, 2015, 2016A and 2016B transactions to be around 7.8% of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 15, 2017, which is higher than most other utility cost recovery charge securitizations we rate. The 7.8% is preliminary and subject to change based on market conditions.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the Authority's projections
2. Implied net charge-offs of 0.62%
3. Collection curve projects 20.0% of collections within 30 days and 80.0% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains LIPA or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case

4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year

5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case

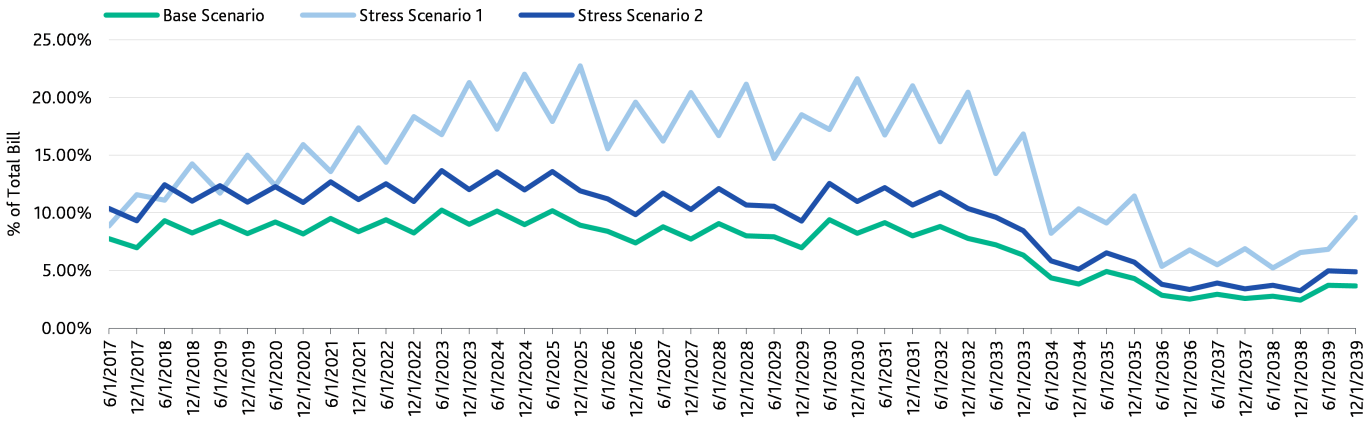
3. Collection curve is the same as in base case

4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 11 shows the projected restructuring charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 12 shows the projected restructuring charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 11

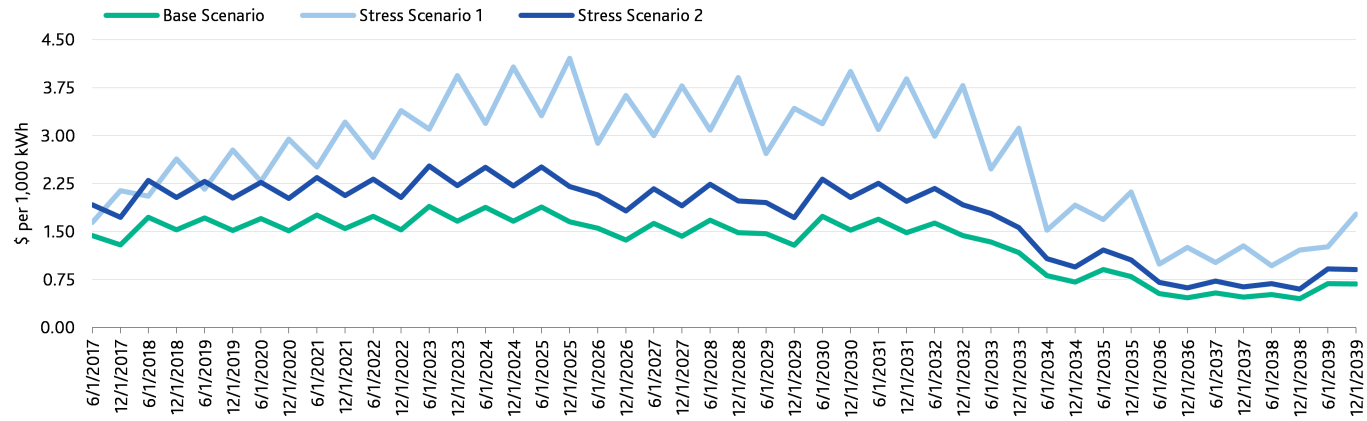
Projected Restructuring Charge as a Percentage of a Customer's Total Bill



Source: Utility Debt Securitization Authority; Moody's calculations

Exhibit 12

Projected Restructuring Charge ($ per 1,000 kWh)



Source: Utility Debt Securitization Authority; Moody's calculations

Comparables

As shown in Exhibit 13, stress scenario 1 is more stressful and results in a peak restructuring charge equal to about 22.74% of a 1,000 kWh per month customer's bill. This is high compared to other utility cost recovery deals.

Exhibit 13

Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
UDSA 2016B	10.25%	22.74%	13.66%
UDSA 2016A	7.21%	16.04%	10.40%
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

On the closing date, the Authority will sell the restructuring property to the issuer pursuant to a sale agreement between the issuer and the Authority. LIPA will be the servicer of the restructuring property. PSEG-LI will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others.

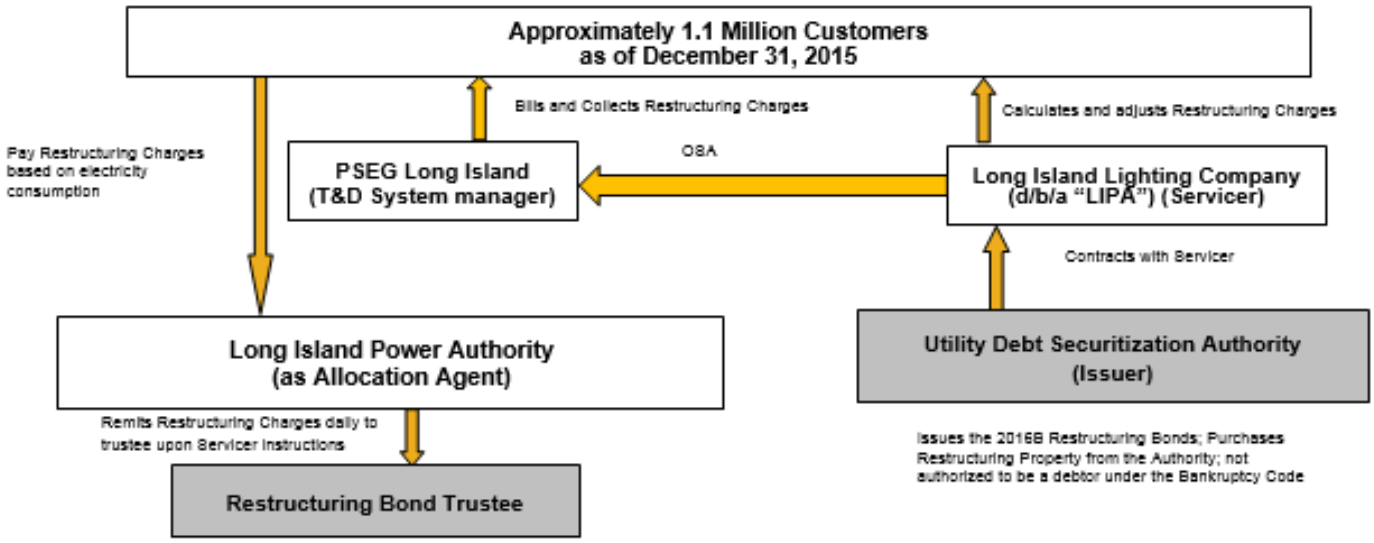
Securitization Structure Description

Structural Diagram

Exhibit 14 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 14

Structural Diagram



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

1. The issuer purchases the restructuring property from the Authority and issues the Series 2016B bonds
2. The issuer contracts with LIPA as servicer to calculate and adjust the restructuring charges
3. LIPA contracts with PSEG-LI to bill and collect the restructuring charges

4. Electric utility customers pay restructuring charge on electricity bills based on electricity consumption
5. The Authority, as allocation agent, remits the restructuring charges to the trustee on a daily basis

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the debt service reserve account. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Operating Reserve Account

On or before the date of issuance of the bonds, the Authority will deliver to the trustee for deposit into the operating reserve account an amount not less than 0.50% of the initial aggregate principal amount of the Series 2016B bonds. Amounts may be withdrawn from the account to pay scheduled principal on the Series 2016B bonds, provided however that an amount not less than 0.50% remains on deposit in the account.

Debt Service Reserve Account

On or before the date of issuance of the bonds, the issuer will make a capital contribution to the trustee in an amount not less than 1.5% of the aggregate outstanding principal amount of the bonds, which will be deposited in the debt service reserve account. Under the financing order, any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the subaccount and applied to subsequent payments.

Cash Commingling

The servicer is entitled to commingle the restructuring charges that it receives with its own funds until it remits the funds to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from restructuring charges with other funds.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the allocation account within two business days. Any discrepancy between estimated and actual collections is mitigated by the true-up mechanism, which allows the Authority to adjust the restructuring charges at any time as needed to make timely interest and principal payments on the bonds.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other operating expenses to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;
6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;

7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

LIPA will calculate the annual true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment. Should LIPA perform a mid-year true-up adjustment, LIPA will similarly calculate the mid-year true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next mid-year true-up adjustment.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period);
5. commencement of an involuntary bankruptcy or similar proceeding against the issuer which remains in effect for 90 days;
6. commencement of a voluntary bankruptcy or similar proceeding by the issuer; or
7. an action violating the financing order or state pledge.

Issuance of Additional Bonds

The issuer can issue up to $4.5 billion in restructuring bonds over four distinct financing orders. To the extent the amount authorized is not issued under this fourth and final financing order, additional financings may be authorized by new financing orders to be adopted at a later date. Each series of restructuring bonds that may be issued will be backed by separate restructuring property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of restructuring bonds. However, the issuer may not issue additional restructuring bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of restructuring property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the restructuring property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under Chapter 9 or any other provision of the Bankruptcy Code.

The issuer was formed solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.

The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from the Authority and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.

Sponsor and Seller

The Long Island Power Authority will be the securitization's sponsor and the seller of the restructuring property. The Authority is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a Chapter 9 debtor pursuant to its enabling legislation.

The Authority took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of the Authority through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

The Authority is governed by a Board of Trustees and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. The Authority is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

The Authority and LIPA are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LIPA conducts the electric business in the service area and is responsible for providing service to customers in the service area. The Authority and LIPA are also parties to an administrative services agreement pursuant to which the Authority provides personnel, personnel-related services and other services necessary for LIPA to provide electric service in the service area.

Administrator

LIPA will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. LIPA, as administrator, will be entitled to receive an annual administration fee of $100,000 payable annually, in arrears.

Securitization Structure Analysis

The key structural feature of this transaction is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage.

In this transaction, the strong true-up mechanism combined with nonbypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds. The operating reserve and debt service accounts provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of LIPA (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

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REPORT NUMBER 1033393

MOODY'S
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CREDIT OPINION
16 June 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Duke Energy Florida Project Finance, LLC Series A Bonds

First Duke Energy Florida-Sponsored Utility Cost Recovery Bond

Capital Structure

Exhibit 1
Provisional (P) Ratings

Series	Provisional Rating	Expected Amount	Coupon	Legal Final Maturity Date
Series A 2018	(P)Aaa (sf)	$183,000,000	Fixed	3/1/2022
Series A 2021	(P)Aaa (sf)	$150,000,000	Fixed	9/1/2024
Series A 2026	(P)Aaa (sf)	$436,000,000	Fixed	9/1/2031
Series A 2032	(P)Aaa (sf)	$250,000,000	Fixed	3/1/2035
Series A 2035	(P)Aaa (sf)	$275,290,000	Fixed	9/1/2038
Total		$1,294,290,000		

The ratings address the expected loss posed to investors by the legal final maturity. In Moody's opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.
Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Summary Rating Rationale

We have assigned provisional ratings to the five classes of bonds (Series A bonds, or the bonds) that Duke Energy Florida Project Finance, LLC (the issuer) will issue. The issuer is wholly-owned by Duke Energy Florida, LLC (DEF; A3 Stable), a subsidiary of Duke Energy Corporation (Baa1 negative), one of the largest utility holding companies in the US. DEF formed the issuer to securitize a special charge on DEF customers' utility bills. The charge is imposed to recover certain costs associated with DEF's retirement of its Crystal River Unit 3 (CR3) nuclear power plant, including certain capitalized costs of the retired nuclear generating asset and ancillary costs and fees, as well as financing costs associated with this issuance. The Series A bonds will be the first utility cost recovery bonds sponsored by DEF.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 15 June 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

As a regulated utility, DEF is typically entitled to recover specified costs of acquiring, constructing and improving energy generating assets which are generally capitalized and recovered over the useful life of that asset. The Florida Public Service Commission (FPSC) has authorized DEF to recover a specified portion of DEF's remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the CR3 nuclear plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges (nuclear asset-recovery property) is the primary collateral backing the Series A bonds.

Our provisional ratings reflect our assessment of the legal and structural aspects of the transaction including the State of Florida's legislation, financing order and state pledge, the mandatory uncapped true-up mechanism, the relatively low level of the recovery charge as compared to prior rated utility cost recovery transactions, the large and diversified ratepayer base, and the credit quality of the servicer.

Credit Strengths

Strength of Legislation and Financing Order: The State of Florida's legislation (Section 366.95, Florida Statutes, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on December 19, 2015 permits the securitization and strongly protects the nuclear asset-recovery property securing the bonds. Similar to other utility cost recovery securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of Florida pledges to bondholders that it will not (1) alter provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of the nuclear asset-recovery property, or (3) except as authorized by the true-up adjustment mechanism, reduce, alter or impair nuclear asset-recovery charges until the bonds have been repaid in full (the state pledge). In addition, the securitization law and financing order contain the typical strong true-sale and security interest provisions.

FPSC's irrevocable financing order authorizes DEF to recover specified costs of retiring the CR3 nuclear plant by collecting nuclear asset-recovery charges. This nuclear asset-recovery property grants the issuer the right to impose, bill and collect, nonbypassable nuclear asset-recovery charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. In this context, nonbypassable refers to the requirement that the charges be levied on all of DEF's existing and future retail electric customers receiving transmission and distribution services in DEF's service area, including customers of any DEF successor or assignee, and even if a customer elects to purchase electricity from an alternative electric supplier following a deregulation of public utilities in Florida.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts nuclear-asset recovery charges semiannually (and quarterly after the last scheduled maturity date of the bonds of any series) to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time if the servicer deems necessary to ensure timely bond payments.

Relatively Low Recovery Charge: DEF expects the securitization's initial nuclear asset-recovery charge to represent around 2.5% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in DEF's service area will receive as of April 2016; this percentage charge is relatively low compared to charges in other utility cost recovery transactions. For context, the three most recent utility cost recovery bond issuances we rated, Utility Debt Securitization Authority, sponsored by LIPA, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 6.9%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in DEF's service area is a credit strength. The service area includes the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas. The service area primarily

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

includes a mix of residential customers (59% by revenue) and commercial customers (28% by revenue). Unlike most other utility cost recovery securitizations, the service area includes very few industrial customers (6% by revenue), which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Strength and Experience of the Servicer: We rate DEF A3 with a stable outlook. DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

Credit Challenges

Challenges to Securitization Law and Financing Order: Potential state and federal legislative and regulatory actions could weaken the legal protections of the nuclear asset-recovery property; however we view this risk as remote. Florida does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for FPSC to amend or revoke the financing order, would be through an amendment to the state constitution or a legislative action, either of which would violate the state pledge. The risk that the State of Florida would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

The people of the State of Florida have the right to amend the Florida Constitution through initiative powers. It is possible that the people of Florida, using their initiative powers, might amend or repeal the Florida Constitution in a manner affecting the securitization law. The process to propose a revision or amendment to the Florida Constitution by initiative is extremely burdensome. DEF is currently unaware of any efforts to amend the Florida Constitution in a manner which would affect the securitization law in any way.

On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (Section 366.93, Florida Statutes) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

We view the risk to bondholders from this litigation as remote. Several past challenges to securitization laws such as this have been unsuccessful, and even in the low likelihood event that this challenge is successful, the arguments put forward by the plaintiffs are generally not relevant to the securitization law.

Potential for Insufficient Collections: Collections arising from the nuclear asset-recovery property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. DEF's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur semiannually and on an interim basis as needed.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Nuclear asset-recovery property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from DEF or its successors or assignees
Service Area:	DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Series A Senior Secured Bonds
Amount:	$1,294,290,000
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Capital Subaccount
Transaction Parties	
Sponsor/Depositor/Servicer:	Duke Energy Florida, LLC
Issuer:	Duke Energy Florida Project Finance, LLC
FPSC Financial Advisor:	Saber Partners, LLC
Trustee:	The Bank of New York Mellon Trust Company, National Association

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Assets Overview

In February 2013, DEF announced it would close and decommission the CR3 nuclear power plant. The FPSC has authorized DEF to recover a portion of its remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges is the primary collateral (nuclear asset-recovery property) backing the Series A bonds.

The bonds are also secured by funds on deposit in the collection account, including the general subaccount, the capital subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds in respect to the pledged collateral.

Assets Description

The Securitization Law

In 2015, the Florida legislature enacted the securitization law, codified as Section 366.95, Florida Statutes. The securitization law allows electric utilities to access lower-cost funds through nuclear asset-recovery bonds pursuant to financing orders issued by the FPSC. One purpose of the securitization law is to lower the cost to customers associated with the long-term financing of costs incurred in connection with the early retirement or abandonment of a nuclear generating asset unit. The early retirement or abandonment must be deemed reasonable and prudent by the FPSC through a final order approving a settlement or other final order issued by the FPSC before July 1, 2017, and the pretax costs to be financed must exceed $750 million.

The securitization law permits DEF to impose irrevocable, binding, nonbypassable nuclear asset-recovery charges on all future and existing customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts sufficient to pay principal of and interest on the bonds and other administrative expenses of the offering. The FPSC governs the amount and terms for collections of these nuclear asset-recovery charges through one or more financing orders issued to DEF. Upon the issuance of the bonds these nuclear asset-recovery charges may not be reduced, impaired, postponed, terminated or otherwise adjusted by the FPSC except as adjusted pursuant to the true-up mechanism.

Florida and other states have passed legislation similar to the securitization law 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.

The securitization law provides that a valid and enforceable security interest in nuclear asset-recovery property will attach only upon the later of: the issuance of a financing order, the execution and delivery of a security agreement with the indenture trustee in connection with issuance of a series of bonds, and the receipt of value for such bonds. Although not governed by the UCC, upon filing notice with the Florida UCC registry the lien and security interest will be continuously perfected. The security interest will have priority in the order of filing and take precedence over any subsequent judicial or other lien creditor. No continuation statements are necessary to maintain such perfection. The servicer pledges in the servicing agreement to file in the Florida UCC registry on or before the closing date and the seller will represent that no prior filing has been made.

The Financing Order

The FPSC issued an irrevocable financing order to DEF on November 19, 2015. That financing order became final and non-appealable on December 19, 2015. Pursuant to the financing order, DEF established the issuer to be a bankruptcy-remote special purpose subsidiary to issue the nuclear asset-recovery bonds. In the financing order, the FPSC authorized the imposition and collection of nuclear asset-recovery charges on all DEF transmission and distribution customers. DEF, as initial servicer, will collect nuclear asset-recovery charges on the issuer's behalf and will remit the nuclear asset-recovery charges to the indenture trustee.

The FPSC expects the financing order to result in a substantial cost savings to ratepayers of $708 million or $1.95 per month for 1,000 kWh, versus the traditional method of cost recovery under current and expected market conditions. The financing order has been praised publicly by regulators and consumer advocacy groups, further insulating the financing order from challenge.

The State Pledge

The securitization law includes a pledge from the State of Florida to the bondholders that it will not (1) alter the provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of nuclear asset-recovery property; or (3) except as authorized by the true-up adjustment mechanism, reduce, alter, or impair the nuclear asset-recovery charges until the bonds have been repaid in full.

Any action of the Florida legislature adversely affecting the nuclear asset-recovery charges or the ability to charge or collect the charges would likely require the State of Florida to pay just compensation under the "takings clause" of the US and Florida Constitutions. The seller agrees that it will institute any action or proceeding necessary to compel performance by the FPSC, the State of Florida or any of their respective agents of any of their obligations or duties under the securitization law or any financing order.

The Nuclear Asset-Recovery Charges

The nuclear asset-recovery charges are nonbypassable, consumption-based charges separate and apart from DEF's base rates; the nuclear asset-recovery charges are to be paid by all existing and future customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts. Such customers must pay nuclear asset-recovery charges even if DEF goes out of business and its transmission and distribution services are taken over by another utility or if a customer elects to purchase electricity from an alternative electric supplier following a fundamental change in regulation of public utilities in Florida. No customer receiving transmission or distribution service from DEF can avoid the charge. The only way to avoid the charge is to disconnect from DEF's electric grid.

The nuclear asset-recovery charges are permitted to continue for 276 months from issuance, or until the bonds are paid in full. The expected scheduled final payment date for the Series A 2033 bonds is 240 months from issuance, providing up to an additional 36 months of nuclear asset-recovery charges if necessary to pay the bonds.

The Nuclear Asset-Recovery Costs

The nuclear asset-recovery charges authorized by the financing order allow DEF to recover nuclear asset-recovery costs related to retiring the CR3 nuclear plant located in Citrus County, Florida. CR3 was originally placed in service in 1977. In February 2013, DEF announced the early retirement of the project. DEF's unrecovered net investment in the project was approximately $1.6 billion. In October 2013, the FPSC approved a settlement agreement whereby DEF agreed to write-off approximately $300 million of its unrecovered net investment in CR3. The settlement agreement allowed DEF to recover its remaining unrecovered net investment in the project of approximately $1.3 billion over a 240 month period beginning no later than the first billing period of January 2017.

The nuclear asset-recovery costs financed by the bonds are equal to (i) the balance of the CR3 regulatory asset as of December 31, 2015 as allowed under the financing order minus (ii) $35,894,547, which, pursuant to the FPSC's Final Order PSC-16-0138-FOF-EI issued on April 5, 2016, shall not be included as part of the CR3 regulatory asset, plus (iii) carrying charges accruing at 6.0% per annum on the balance of the CR3 regulatory asset (adjusted as described in (ii) above) from December 31, 2015 through June 21, 2016.

Excluded from the amount being financed is $35,894,547 of costs claimed pursuant to Section 366.93, Florida Statutes. On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (366.93) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

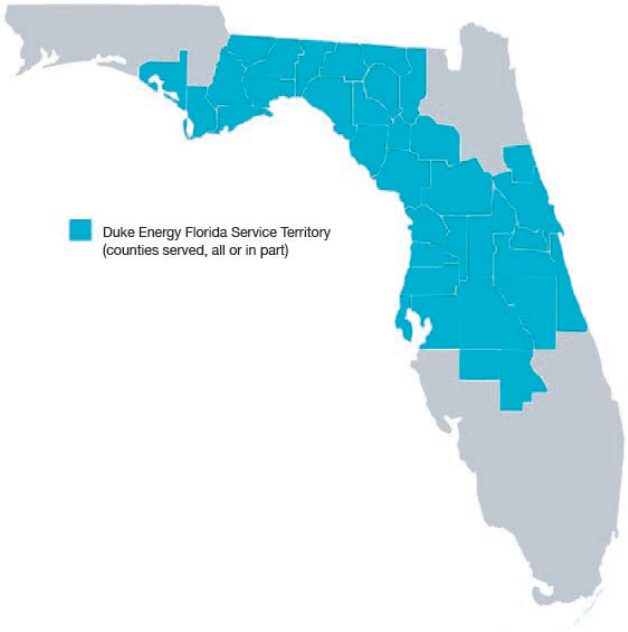
The suit claims DEF unlawfully charged customer higher rates to cover more than $1.2 billion in expenses at its Crystal River nuclear power plant and at its proposed (and now shelved) Levy County nuclear plant site. In addition to the suit seeking relief for nuclear recovery costs, it also seeks to nullify as unconstitutional the nuclear cost recovery system and all nuclear cost recovery orders issued by the FPSC, and it seeks an order enjoining defendants from further unlawful charges. The likelihood of the lawsuit prevailing is low considering other lawsuits challenging the constitutionality of Florida's nuclear cost recovery statute have been found to be without merit and rejected by Florida courts.

The Service Area

DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers. During the twelve

months ended December 31, 2015, DEF billed approximately 38.6 billion kilowatt hours of electricity to its covered electric customers in Florida, resulting in revenues of approximately $4.4 billion. Exhibit 4 below shows a map of DEF's service area.

Exhibit 4
Duke Energy Florida Service Area



Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Statutory Uncapped True-Up Adjustment Mechanism

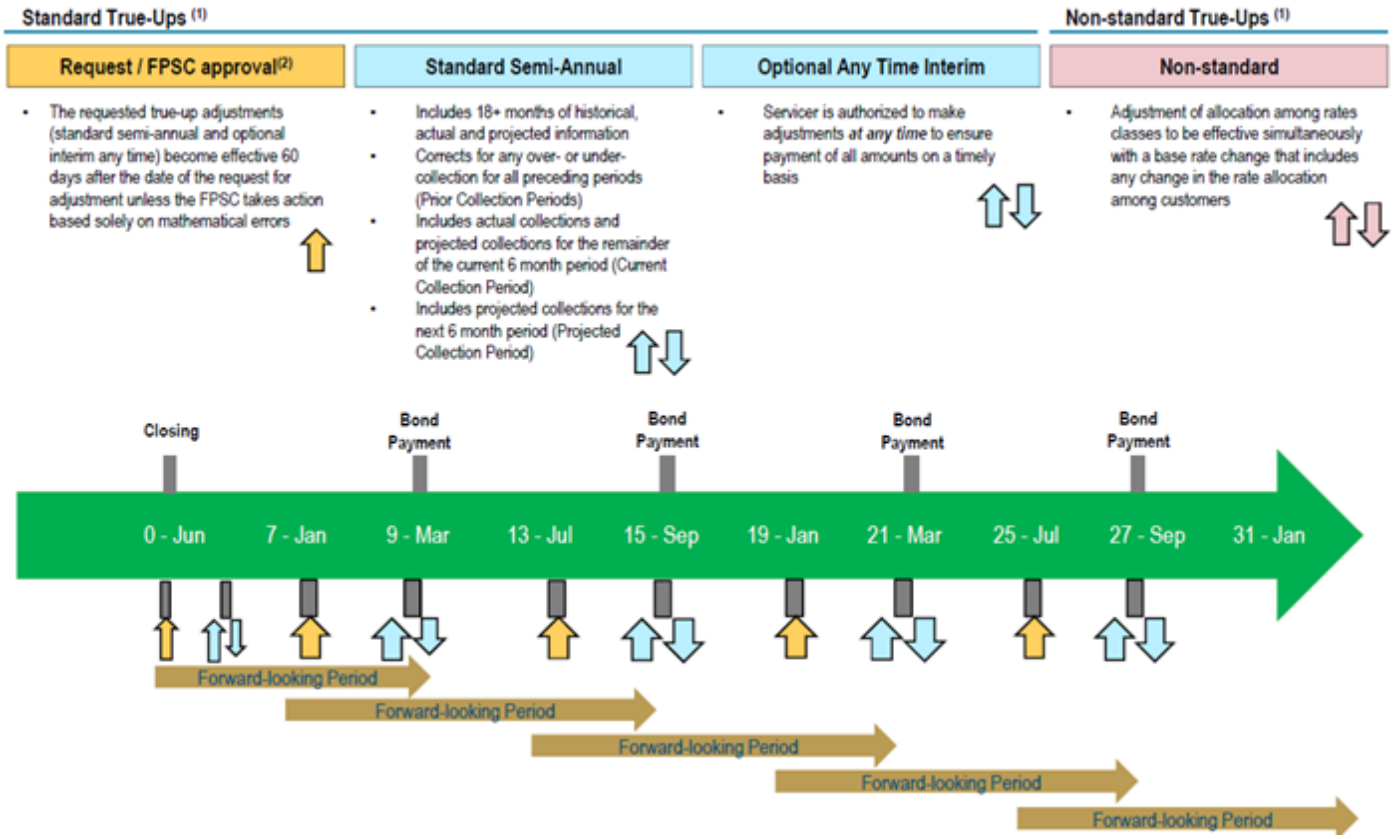
The securitization law and the financing order require that the issuer or DEF file with the FPSC at least semi-annually (and quarterly after the scheduled final payment date for the latest maturing bond) a letter applying the true-up mechanism to correct for any overcollection or undercollection of the nuclear asset-recovery charges and make any adjustments to ensure the recovery of revenues sufficient to provide for the timely payment of scheduled principal and interest on the bonds and other required amounts and charges. The FPSC's review of any adjustment request is limited solely to determining whether there is any mathematical error in the application of the formula-based mechanism.

Under the servicing agreement, the servicer will make adjustments to the nuclear asset-recovery charges at least semi-annually. In addition to the semi-annual true-up adjustment, the servicer is authorized to make interim adjustments at any time for any reason to ensure the timely payment on the bonds. In addition, the servicer will make a non-standard true-up adjustment to be effective simultaneously with a base rate change that includes any change in the rate allocation among customers used to determine the nuclear asset-recovery charges. Exhibit 5 below illustrates the true-up mechanism.

Under the irrevocable financing order, the FPSC guarantees it will act, as directed by the securitization law, to implement the true-up mechanism for making any adjustments that are necessary to correct for any overcollection or undercollection of the nuclear asset-recovery charges or to otherwise ensure the timely payment of principal of and interest on the bonds when due.

Exhibit 5

True-Up Mechanism



Source: DEF

Servicing

DEF will be the initial servicer of the bonds. DEF, as servicer, will be responsible for, among other things, calculating, billing, collecting and posting the nuclear asset-recovery charges from customers, submitting requests to the FPSC to adjust these charges, monitoring the collateral for the bonds and taking certain actions in the event of non-payment by a customer. The indenture trustee's receipt of collections in respect of the nuclear asset-recovery charges, which will be used to make payments on bonds, will depend in part on the skill and diligence of the servicer in performing these functions.

DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

DEF will be entitled to receive an annual servicing fee in an amount equal to 0.05% of the aggregate initial principal amount of the bonds. This servicing fee will be payable in equal installments on each semi-annual payment date, in arrears. If DEF or any of its affiliates is not the servicer, the successor servicing fee may be up to 0.60% of the initial principal amount of the bonds unless a higher fee is approved by the FPSC.

In the event of a servicer default, the indenture trustee, at the direction of a majority of bondholders or at the direction of the FPSC, may terminate the rights and obligations of the servicer under the servicing agreement. However, replacement of the servicer would require the agreement of the indenture trustee and the administrative agents under DEF's accounts receivable sale programs.

Credit, Billing and Budget Billing

DEF is required to provide transmission and distribution service to all qualified customers. First time customers establishing residential electric accounts are generally required to pay a deposit as are customers that do not satisfy threshold credit score requirements.

The amount of the deposit reflects the estimated use over a two-month period, which is the maximum DEF may collect by law. As a general rule, non-residential accounts require deposit coverage. Consumer credit is not used to determine credit worthiness on non-residential accounts.

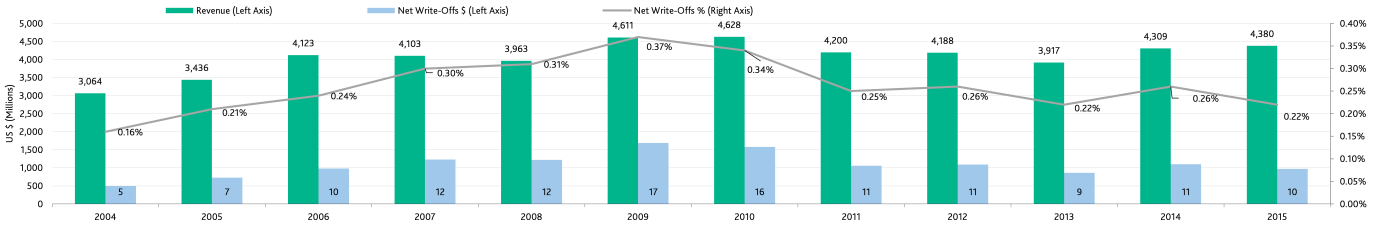
DEF bills its customers once every 24 to 39 days and distributes approximately 85,000 bills on each business day to its customers. Approximately 6% of DEF's residential customers choose to be billed using DEF's budget billing program. For these customers, DEF determines and bills a monthly budget based on the last twelve months of billing history for each account. Budget billing does not affect the amount of nuclear asset-recovery charges that the servicer remits to the indenture trustee on a daily basis.

Bills are due 21 calendar days after the issue date at which time they are considered delinquent. For the year ended December 31, 2015, approximately 6% of total billed retail revenue became eligible for disconnect and 1% was disconnected. Approximately 87% of accounts disconnected for nonpayment ultimately make full payment and have service restored. Unpaid final bills are written off approximately 30 days after the final bill is issued.

Exhibit 6 below shows net write-offs since 2004, which have ranged from a low of 16bps of billed revenue in 2004 to a crisis period peak of 37bps in 2009. DEF's forecast is 26 bps, consistent with the post-crisis performance history.

Exhibit 6

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: DEF

While more than 7.5% of customers are typically 30-59 days past due, by the third month most delinquencies are cured, with those still outstanding past 90 days well under 1% throughout the observation period. Exhibit 7 shows DEF customer delinquency data since 2005.

Exhibit 7

Delinquencies as a Percentage of Total Billed Revenues

	As of 2005	As of 2006	As of 2007	As of 2008	As of 2009	As of 2010	As of 2011	As of 2012	As of 2013	As of 2014	As of 2015
30-59 days	8.27%	8.51%	9.66%	8.41%	9.38%	7.82%	7.79%	7.59%	7.48%	7.79%	7.73%
60-89 days	0.92%	0.87%	1.12%	1.07%	0.78%	0.59%	0.57%	0.54%	0.59%	0.64%	0.57%
90+ days	0.52%	0.56%	0.90%	0.66%	0.51%	0.33%	0.22%	0.21%	0.28%	0.33%	0.33%
Total	9.71%	9.94%	11.68%	10.14%	10.67%	8.75%	8.58%	8.34%	8.35%	8.76%	8.63%

Source: DEF

Assets Analysis

Strong Service Area

This transaction benefits from the size and diversity of the ratepayer base within DEF's service area and the projected population growth and economic stability of the ratepayer base. During 2015, approximately 9% of DEF's total retail billed electric consumption was by industrial customers, approximately 31% was by commercial customers and approximately 52% was by residential customers, with other entities comprising approximately 8%. Exhibit 8 shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 8
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	57.91%	57.70%	56.85%	57.21%	56.94%	57.34%	59.72%	58.18%	56.96%	58.49%	58.85%	59.43%
Commercial	27.66%	27.57%	27.89%	28.06%	28.39%	28.46%	27.01%	28.10%	28.85%	28.11%	27.81%	27.51%
Industrial	7.65%	7.73%	7.98%	7.34%	7.31%	6.70%	6.14%	6.40%	6.53%	6.12%	6.10%	5.91%
Streetlighting	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%	0.04%	0.05%	0.04%	0.04%	0.04%
Public Authority	6.73%	6.95%	7.22%	7.34%	7.31%	7.44%	7.09%	7.28%	7.61%	7.24%	7.20%	7.11%

Source: DEF

For the year ended December 31, 2015, the ten largest retail electric customers represented approximately 8.3% of DEF's retail kilowatt-hour sales. There are no material concentrations in the residential class. As of the closing date, no customer or group of related commercial or industrial customers will be obligated to pay more than 10% of the nuclear asset-recovery charges.

Exhibit 9
Top 10 DEF Customers

	Industry	Energy Usage (MWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	Mining/Chemical Processing	691,591	1.79%	$46,289	1.06%
2	Education	456,852	1.18%	$37,972	0.87%
3	Retail Grocery	393,738	1.02%	$35,619	0.81%
4	Mining/Chemical Processing	340,470	0.88%	$23,343	0.53%
5	Education	252,072	0.65%	$27,720	0.63%
6	Retail Trade	250,016	0.65%	$24,409	0.56%
7	Stone/Clay/Glass	236,193	0.61%	$15,771	0.36%
8	Education	201,586	0.52%	$23,188	0.53%
9	Retail Grocery	199,997	0.52%	$19,744	0.45%
10	Government	175,246	0.45%	$16,124	0.37%
	Total	3,197,761	8.29%	$270,179	6.17%

Source: DEF

Remote Risk of Severe Ratepayer Base Declines

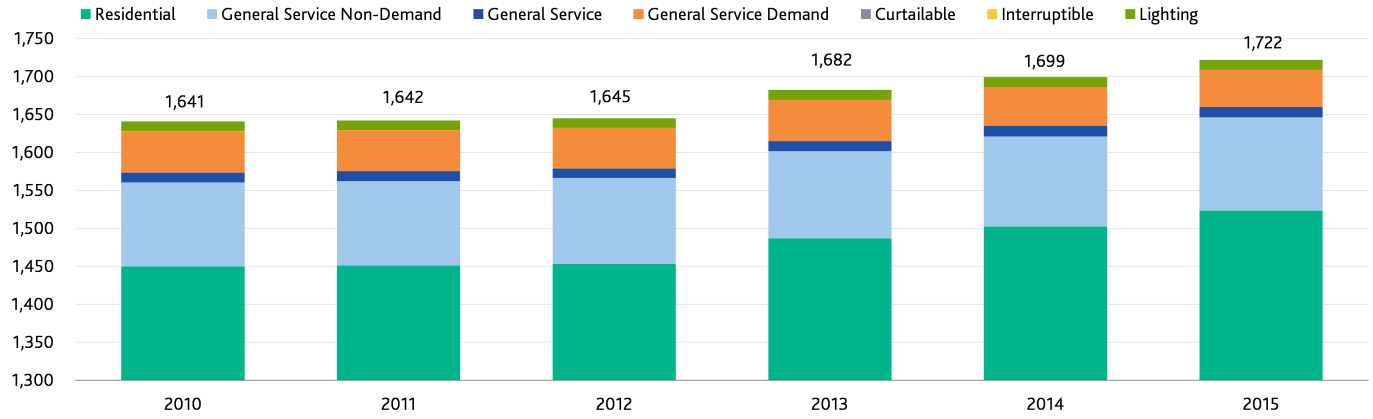
The ratepayer base is sensitive to many macroeconomic factors, including service area population and household formation growth, expected disconnects due to use of self-generation, changes in the service area and potential municipalizations. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Population Growth

Florida's robust population trend is a benefit to the transaction. According to the Census Bureau, the state's population grew an average of 1,000 residents per day in 2015. This 1.8% increase was the largest since 2006 and the strongest in the South. Despite the rapid rise, population growth will likely accelerate further because the pace remains historically weak. In the 50 years before the Great Recession, annual population growth in the state exceeded last year's pace by 47 times. Florida should also expect faster expansion because its cities appeal to Hispanics—the nation's fastest growing ethnic group—and retiring baby boomers— the fastest-growing age

group in the U.S. In 2015, for the third consecutive year, The Villages, Central Florida's retiree haven, was the nation's fastest growing metro area in population. Exhibit 10 shows that growth in the average number of DEF retail electric customers since 2010.

Exhibit 10
Average Number of Retail Electric Customers



Source: DEF

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of nuclear asset-recovery charges on other non-self-generating ratepayers. Based on existing legislation precluding the use of third-party owned solar equipment, DEF expects the estimated cost of self-generation for customers, combined with the practical obstacles to installing on-site generation, to limit self-generation from being installed by any meaningful number of customers within the service area. DEF forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The nuclear asset-recovery charge will be recoverable from all DEF customers taking transmission or distribution service from DEF. Thus, if the service area expands in the future, the new DEF customers would be subject to the nuclear asset-recovery charge on a going-forward basis. Pursuant to the financing order, any successor to DEF is required to perform all obligations and have the same rights under the financing order as DEF, including the collection of the nuclear asset-recovery charges from customers and payment of appropriate amounts to the issuer.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges and the likelihood that even after a municipalization, DEF's transmission and distribution services will continue to be used. While multiple municipal utilities exist in Florida, DEF is unaware of any municipality that has municipalized, or attempted to municipalize, a portion of an investor-owned utility's service territory in the absence of an agreement. One municipality, the City of Winter Park, was municipalized pursuant to such an agreement. DEF previously had a franchise agreement that provided Winter Park with a unilateral purchase option at the expiration of the franchise agreement. In the instance of the Winter Park municipalization, DEF sought affirmative permission from the FPSC to be relieved of its obligation to serve the City of Winter Park, which the FPSC subsequently approved. Any municipality using DEF's transmission and distribution system following a municipalization will be considered a successor and its customers will be subject to the nuclear asset-recovery charge.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact DEF's operations, temporarily interrupting transmission, distribution and consumption of

electricity, hence reducing the collections of nuclear asset-recovery charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the DEF service area, which could cause the per-kWh nuclear asset-recovery charge to be greater than expected.

The only year with any significant loss of energy consumption due to natural disasters was 2004, when a series of three Hurricanes struck the DEF service area. The impacts came from "Charley" (Aug 13-20), "Frances" (Sep 4-10) and "Jeanne" (Sep 25-30). Estimated lost energy sales came from studying reduced levels of daily system requirements totaling 400,000 MWh over these three disasters. This represents about 1% of the total annual electric usage for 2004 (38,193 GWh).

Forecasting Electricity Consumption

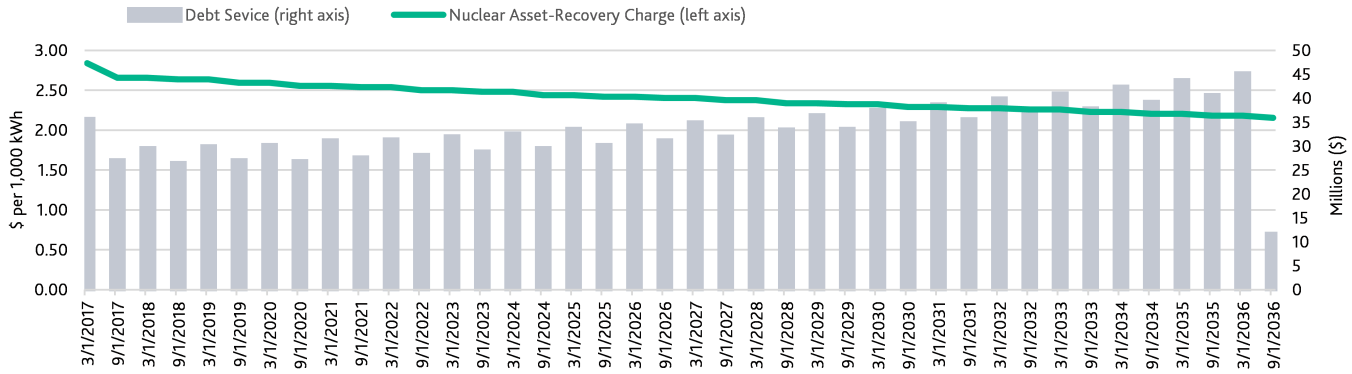
The nuclear asset-recovery charges are assessed based on forecasted customer usage. The amount and the rate of nuclear asset-recovery charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs. If the servicer inaccurately forecasts electricity consumption or underestimates customer delinquency or write-offs when setting or adjusting the nuclear asset-recovery charges, there could be a shortfall or material delay in nuclear asset-recovery charge collections prior to the next true-up.

The forecast utilized in the proposed bond structure is the 2016 Ten Year Site Plan filed with the FPSC in April 2016. Internal forecasts are updated at least twice per year but are not filed with the FPSC. The DEF forecast of customers, energy sales, and peak demand applies both an econometric and end-use methodology. External sources of data include economic series from Moody's Analytics and State population data from the University of Florida's Bureau of Economic & Business Research. Internal company forecasts are used for projections of electricity price, and weather conditions. The forecast incorporates population and household trends, employment and production trends, technology and energy efficiency trends, and weather and climate trends. DEF has a more granular forecast for the phosphate industry, at the customer level, due to the high concentration of customers in this industry among DEF's industrial customer base.

Exhibit 11 shows the forecasted nuclear asset-recovery charge per 1,000 kWh and scheduled debt service payments.

Exhibit 11

Nuclear Asset-Recovery Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: DEF; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Without an interim true-up adjustment, greater than 60% forecast variance would be needed leading up to any payment date to cause a payment default. Greater than 65% forecast variance would be needed in the first payment period to cause a payment default, assuming the servicer makes an interim true-up adjustment midway into the first payment period. By contrast the maximum forecast variance since 2011 has been less than 6%, as shown in Exhibit 12.

Exhibit 12
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	0.27%	-0.23%	-0.08%	2.14%	1.92%
Commercial	2.00%	0.82%	0.80%	1.40%	0.44%
Industrial	-3.09%	1.56%	-1.88%	3.87%	-3.25%
Public Authority	-2.40%	5.92%	0.50%	1.00%	-0.65%

Source: DEF

Cash Flow Analysis

We examined the cash flows that the nuclear asset-recovery charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the nuclear asset-recovery charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the nuclear asset-recovery charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the nuclear asset-recovery charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the nuclear asset-recovery charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the nuclear asset-recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Even in our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the nuclear asser-recovery charge is less than 7%.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the projections by DEF, which increases annually by a compounded 1 - 1.5%, through bond maturity
2. Implied net charge-offs of 0.2615%
3. Collection Curve projects 13.3% of collections within 30 days and 86.4% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains DEF or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case
4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year
5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

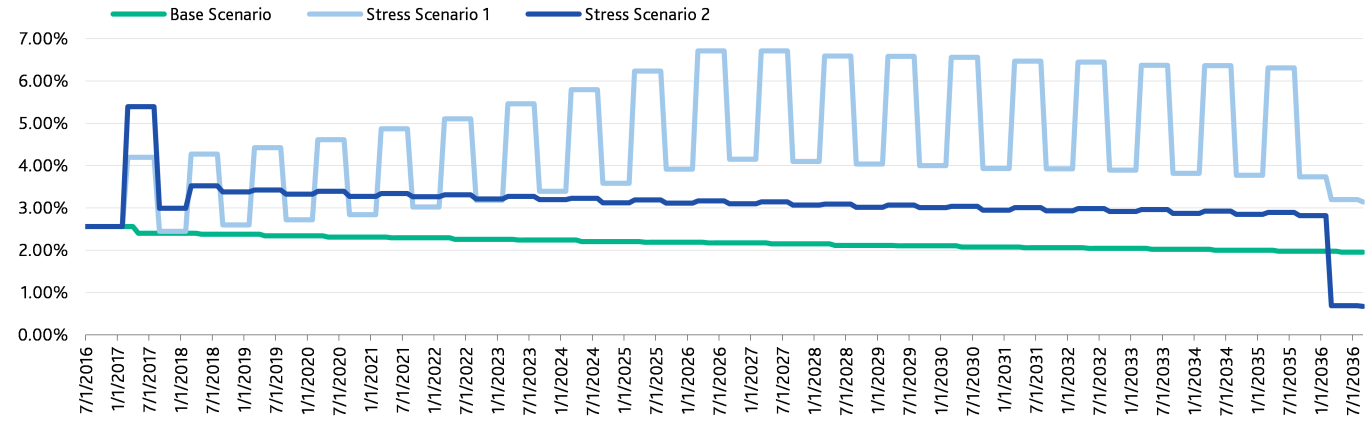
1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case
3. Collection curve is the same as in base case
4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 13 shows the projected nuclear asset-recovery charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 14 shows the projected nuclear asset-recovery charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 13

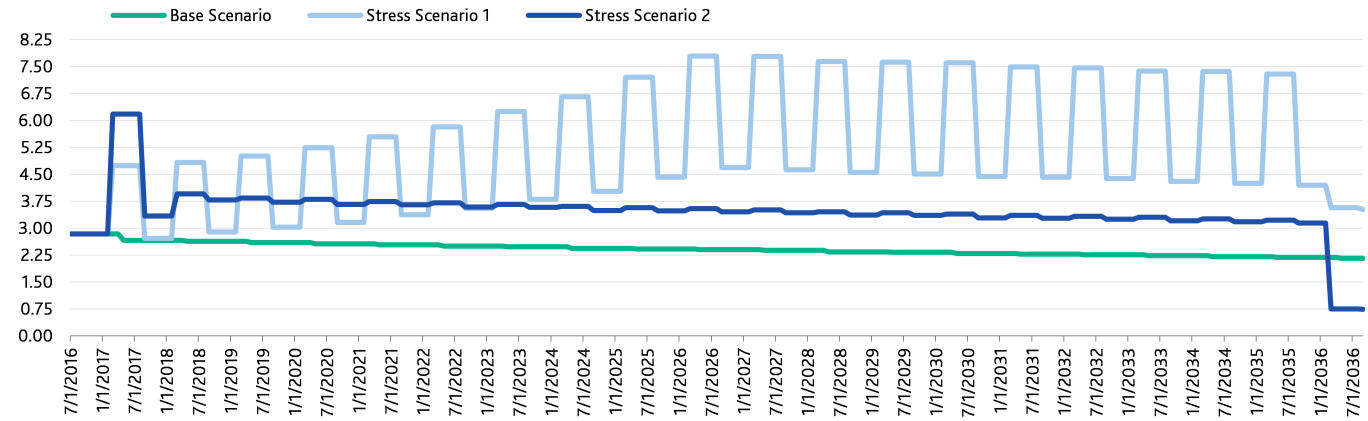
Nuclear Asset-Recovery Charge as a Percentage of a 1,000 kWh Customer's Total Bill



Source: DEF; Moody's calculations

Exhibit 14

Nuclear Asset-Recovery Charge ($ per 1,000 kWh)



Source: DEF; Moody's calculations

Comparables

As shown in Exhibit 15, stress scenario 1 is more stressful and results in a peak nuclear asset-recovery charge equal to about 6.94% of a 1,000 kWh per month customer's bill. This is low compared to other utility cost recovery deals.

Exhibit 15
Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2016A	7.21%	16.04%	10.40%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

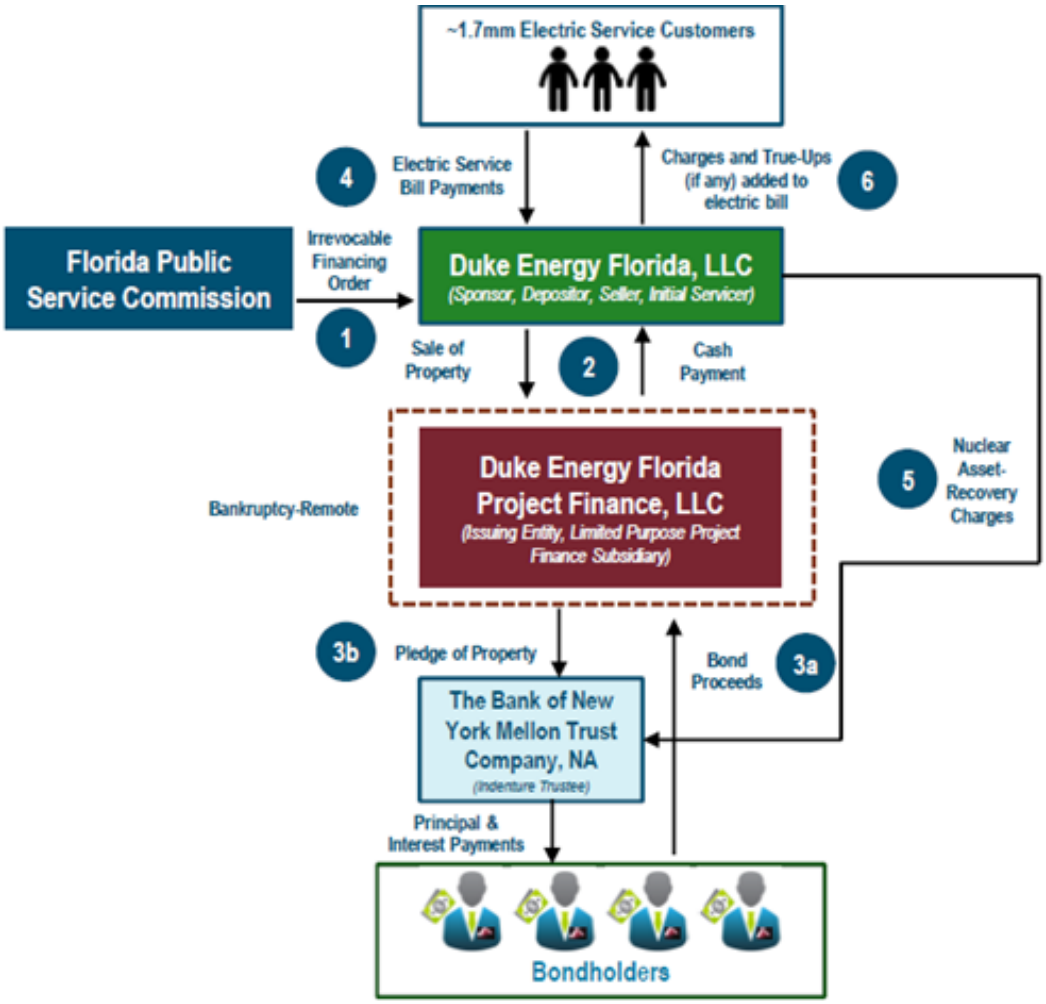
On the closing date, DEF will sell the nuclear asset-recovery property to the issuer pursuant to a sale agreement between the issuer and DEF. DEF will service the nuclear asset-recovery property pursuant to a servicing agreement between the issuer and DEF.

Securitization Structure Description

Structural Diagram

Exhibit 16 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 16
Structural Diagram



Source: DEF

1. FPSC issues financing order, permitted under state statute, that creates nuclear asset-recovery property in the hands of DEF
2. Via a true sale, DEF transfers the nuclear asset-recovery property to the issuer in exchange for cash payment
3. (a) Nuclear asset-recovery bonds issued in exchange for cash payment from bondholders (b) Nuclear asset-recovery property is pledged to indenture trustee for benefit of the bondholders
4. Electric utility customers pay charge on electricity bills on joint and several basis
5. Payments from electric utility customers used to pay principal and interest on the bonds
6. At least semi-annually, and, as frequently as monthly (any time), charge on all electricity customers adjusted to whatever level necessary (i.e., not subject to cap) to ensure timely principal and interest payments on the bonds

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the capital subaccount. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Capital Subaccount

On or before the date of issuance of the bonds, DEF will make a capital contribution to the issuer in an amount not less than 0.5% of the initial principal amount of the bonds, which will be deposited in the capital subaccount. Under the financing order, DEF will be entitled to a return on this capital contribution equal to the rate of interest on the latest maturing bond and payable according to the priority of payment set forth in the indenture and the series supplement.

Cash Commingling

The servicer is entitled to commingle the nuclear asset-recovery charges that it receives with its own funds until the funds are remitted to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from nuclear asset-recovery charges with other funds.

The servicer will remit nuclear asset-recovery charges based on estimated collections using a weighted average balance of days outstanding on DEF's retail bills. Nuclear asset-recovery charge collections remitted will represent the charges estimated to be received for any period based upon the average days outstanding and an estimated system-wide write-off percentage.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated nuclear asset-recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the indenture trustee within two business days.

Payment Priority

On each payment date, the indenture trustee will pay all amounts on deposit in the general subaccount of the collection account in the following order of priority:

1. payment of the indenture trustee's fees, expenses and outstanding indemnity amounts in an amount not to exceed annually $500,000 in the then current calendar year;
2. payment of the servicing fee plus any unpaid servicing fees from prior payment dates;
3. payment of the administration fee to the extent due on that payment date and of the fees of our independent manager plus any unpaid administration or management fees from prior payment dates;

4. payment of all of our other ordinary periodic operating expenses;
5. payment of the interest then due, including any past-due interest;
6. payment of the principal required to be paid on the final maturity date for each series or as a result of acceleration upon an event of default;
7. payment of the principal then scheduled to be paid in accordance with the expected sinking fund schedule, including any previously unpaid scheduled principal, paid pro rata among the bonds if there is a deficiency;
8. payment of any of our remaining unpaid operating expenses and any remaining amounts owed pursuant to the basic documents;
9. replenishment of any amounts drawn from the capital subaccount;
10. release to DEF of an amount equal to the rate of return on the amount contributed to the capital subaccount, including any portion of such rate of return for any prior payment date that has not yet been paid, so long as no event of default has occurred and is continuing; and
11. allocation of the remainder collected, if any, to the excess funds subaccount for future payments.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. a default for five business days in the payment when due of any interest on any bond;
2. a default in the payment of the then unpaid principal with respect to any series on the final maturity date for that series;
3. a default in the observance or performance of any covenants or agreements made by the issuer in the indenture or the series supplement (other than defaults described above) which continues for 30 days;
4. any representation or warranty made by the issuer having been incorrect in any material respect as of the time made, and such breach not having been cured within 30 days;
5. certain events of bankruptcy, insolvency, receivership or liquidation with respect to the issuer; or
6. a breach by the State of Florida or any of its agencies (including the FPSC), officers or employees that violates the pledge of the State of Florida.

Issuance of Additional Bonds

As authorized by the financing order, the issuer's organizational documents and the transaction documents give the issuer authority and flexibility to issue additional nuclear asset-recovery bonds in future transactions, with the approval of the FPSC. Each series of nuclear asset-recovery bonds that may be issued will be backed by separate nuclear asset-recovery property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of nuclear asset-recovery bonds. However, the issuer may not issue additional nuclear asset-recovery bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of nuclear asset-recovery property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the nuclear asset-recovery property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The issuer's limited liability company agreement requires that it have at least one independent manager, whose selection and replacement will be subject to ratification by the FPSC. The limited liability company agreement does not permit the issuer to engage in any activities not directly related to purchasing and owning the nuclear asset-recovery property and issuing one or more series of nuclear asset-recovery bonds. The list of permitted activities set forth in the limited liability company agreement may not be altered,

amended or repealed without the affirmative vote of a majority of the managers, which vote must include the affirmative vote of the independent manager.

Sponsor and Seller

DEF is the sponsor of the transaction and the seller of the nuclear asset-recovery property. DEF, a Florida limited liability company, is a regulated public utility primarily engaged in the generation, transmission, distribution, and sale of electricity in portions of Florida. DEF is an indirect, wholly-owned subsidiary of Duke Energy Corporation, one of the largest regulated utility holding company in the US.

DEF is subject to the jurisdiction of the Florida Commission with respect to retail utility rates, accounting, utility services, certain facilities, certain asset transfers, certain corporate mergers and other matters. DEF is subject to the jurisdiction of the Federal Energy Regulatory Commission under the Federal Power Act with respect to acquisitions, operations and disposals of certain assets and facilities, services provided and rates charged, conduct among affiliates and other matters, and its nuclear power plant is also subject to the jurisdiction of the Nuclear Regulatory Commission.

Administrator

DEF will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. DEF, as administrator, will be entitled to receive an annual administration fee of $50,000 payable annually, in arrears. The administrator may not resign or be removed without satisfaction of the rating agency condition.

Securitization Structure Analysis

The Series A bonds are a relatively simple sequential structure without subordination and the capital subaccount provides sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of DEF (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating

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MOODY'S
INVESTORS SERVICE

Standard & Poor's Reviews, Affirms, 68 Classes From 31 Stranded Cost Transactions

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OVERVIEW

- We affirmed our ratings on 68 classes from 31 stranded cost securitizations.
- All of the transactions are backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts supporting our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations.

NEW YORK (Standard & Poor's) Feb. 25, 2013--Standard & Poor's Ratings Services today affirmed its ratings on 68 classes from 31 stranded cost securitizations (see list).

The affirmations reflect the transactions' ongoing stable performance and their continued ability to pay interest and principal in a manner commensurate with an 'AAA (sf)' rating stress, in our view.

Stranded cost securitizations are typically backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts. As currently constructed, the enhancement supports our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations. These securities traditionally have been created under state legislation in conjunction with the state utility commission, with the utility as the

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seller/servicer of the assets. Key features of the deals include:

- There are irrevocable statutory provisions and regulatory approvals, including the creation of mandatory periodic true-up of a nonbypassable transition charge and an absolute transfer and first-priority security interest in transition property;
- The true-up mechanisms are in place to ensure the transition charge can be adjusted to reflect any deficit in collections, as well as any other credit enhancement accounts; and
- There are typically cross-collateralization features such that all the customer classes help pay down the bonds. There may be certain deals that have rate caps and/or do not allow cross-collateralization.

For more information on legal and economic defeasance, please see "Securitizing Stranded Costs," published Jan. 18, 2001 on RatingsDirect.

As part of our regular surveillance, we reviewed and affirmed 68 classes from 31 stranded cost transactions.

Standard & Poor's will continue to monitor the securitizations and take rating actions as we deem necessary according to our criteria.

STANDARD & POOR'S 17G-7 DISCLOSURE REPORT

SEC Rule 17g-7 requires an NRSRO, for any report accompanying a credit rating relating to an asset-backed security as defined in the Rule, to include a description of the representations, warranties and enforcement mechanisms available to investors and a description of how they differ from the representations, warranties and enforcement mechanisms in issuances of similar securities. The Rule applies to in-scope securities initially rated (including preliminary ratings) on or after Sept. 26, 2011.

If applicable, the Standard & Poor's 17g-7 Disclosure Report included in this credit rating report is available at http://standardandpoorsdisclosure-17g7.com

RELATED CRITERIA AND RESEARCH

- Standard & Poor's To Explicitly Recognize Credit Stability As An Important Rating Factor, Oct. 15, 2008
- Principles-Based Rating Methodology for Global Structured Finance Securities, May 29, 2007
- Legal Criteria For U.S. Structured Finance Transactions: Special-Purpose Entities, Oct. 1, 2006
- Securitizing Stranded Costs, Jan. 18, 2001

RATINGS AFFIRMED

AEP Texas Central Transition Funding II LLC
A
Rating

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A2	AAA (sf)
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

AEP Texas Central Transition Funding LLC
2002-1

	Rating
A-4	AAA (sf)
A-5	AAA (sf)

Atlantic City Electric Transition Funding LLC
2002-1

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Atlantic City Electric Transition Funding LLC
2003-1

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Centerpoint Energy Restoration Bond Company, LLC

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

CenterPoint Energy Transition Bond Company II LLC
A

	Rating
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

CenterPoint Energy Transition Bond Company LLC
2001-1

	Rating
A4	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

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Consumers Funding LLC
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Detroit Edison Securitization Funding LLC (The)
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Entergy Gulf States Reconstruction Funding I LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Entergy Texas Restoration Funding, LLC
Senior Secured Transition

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

FPL Recovery Funding LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding II LLC
2006-A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding LLC
2002-A

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Louisiana Public Facilities Authority-EGSL
2008

	Rating
A-1	AAA (sf)

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A-2	AAA (sf)
A-3	AAA (sf)

Louisiana Public Facilities Authority-ELL
2008

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Massachusetts RRB Special Purpose Trust 2005-1
2005-1

	Rating
A-4 BEC	AAA (sf)
A-4	AAA (sf)
A-4 CEC	AAA (sf)

Massachusetts RRB Special Purpose Trust WMECO-1

	Rating
A	AAA (sf)

MP Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

MP Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PE Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

PE Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PSE&G Transition Funding II LLC
2005-1

	Rating
A-3	AAA (sf)

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A-4	AAA (sf)

PSE&G Transition Funding LLC
2001-1

	Rating
A-6	AAA (sf)
A-7	AAA (sf)
A-8	AAA (sf)

PSNH Funding LLC
2001-1

	Rating
A-3	AAA (sf)

Rockland Electric Company Transition Funding LLC
2004-1

	Rating
2004-1	AAA (sf)

RSB BondCo LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2003-1

	Rating
A-4	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2004-1

	Rating
A-3	AAA (sf)

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Securitizing Stranded Costs

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Securitizing Stranded Costs

*(**Editor's Note:** We originally published this criteria article on Jan. 18, 2001. We've republished it following our periodic review completed on Dec. 1, 2016. As a result of our review, we updated the contact information and the related criteria, and corrected a reference in the section "Adequate Provision.")*

Electric utilities historically have enjoyed protected monopolistic status, in return for an obligation to provide service to the customer base whenever requested. In return, utilities have made significant long-term investments and entered into long-term power purchase contracts with the expectation that these would be recoverable through customer rates. In 1992, the enactment of the National Energy Policy Act introduced wholesale electric competition into the industry. Since then, almost half the states have taken steps toward a competitive retail market by legislating or ordering frameworks for "retail access," through which all customers will be able to choose their own electric generation supplier. With a competitive market taking shape, many utilities have found themselves saddled with significant unrecoverable contractual and sunk costs, generically known as stranded costs. These stranded costs are not new, but rather have already been approved by regulators and are incorporated in existing utility rates as part of traditional cost-plus regulation. If utilities are to compete in a deregulated market, however, they cannot pass these stranded costs along to customers. In many cases, the inability of a utility to recover a significant portion of these costs would result in significant financial deterioration, and in the worst cases, insolvency.

As noted, many legislatures and state regulatory commissions have established the means by which utilities can avert financial deterioration while also providing customers with lower rates. Asset-backed securitization is one such alternative. In several states, such as California, Pennsylvania, Massachusetts, Texas, New Jersey, Michigan, New Hampshire, Connecticut and Illinois, legislatures have enacted laws that enable utilities to finance the recover-y of at least a portion of their stranded costs by issuing bonds backed by a statutory right to recover stranded costs.

In December 1997, the three California investor-owned utilities: Pacific Gas & Electric Co., Southern California Edison Co., and San Diego Gas & Electric Co., securitized more than $6 billion of their approximately $28 billion of total stranded investment. During 1998, Illinois Power Co. securitized $864 million followed by Commonwealth Edison Co.'s $34 billion securitization transaction. In 1999, one Massachusetts utility and three Pennsylvania utilities completed securitization transactions. Boston Edison Company issued $725 million of rate reduction certificates. PECO Energy Co. issued $4 billion, PP & L Inc. issued $2.42 billion and West Penn Power Company issued $600 million of transaction bonds. In 2000, PECO issued an additional $1 billion and in 2001, utilities in New Jersey, Connecticut, Michigan, and Texas may come to market with rate reduction bonds.

Utilities in states that have not yet addressed industry restructuring through legislative action or regulatory order, such as Indiana, Kentucky, Florida, and North Carolina, are generally low-cost producers with limited, if any, stranded assets. These states are much less motivated, therefore, to pursue industry restructuring, let alone securitization, at the present time. Whether or not these states ultimately pass relevant legislation, however, the relative competitive standing of their utilities will inevitably be diluted as high-cost utilities in other states shed a substantial portion of their high-cost assets through securitization.

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Standard & Poor's believes that securitization of stranded costs is at least neutral, and generally positive for utility credit quality. The utility acquires cash up front, instead of receiving an increasingly at-risk revenue stream over time. Proceeds of the securitization are expected to be used principally to shrink a utility's total capitalization structure, including retiring debt that carries a higher coupon than that borne by the highly rated securitized bonds. In most cases, these interest savings are passed along directly to customers in the form of lower rates. Generally, the amount of rate reduction bonds that the utilities issued was designed specifically to generate a legislatively mandated rate reduction for customers.

Business and Legal Overview

What Are Stranded Costs?

Stranded costs are broadly defined to include any costs that were incorporated in the traditional regulatory cost-plus scheme that cannot be passed on to customers in a competitive marketplace. The most significant of these stranded costs are investments in high-cost nuclear and fossil plants. They also include deferred and capitalized operating costs, conservation and economic development expenditures, nuclear decommissioning costs, and long-term contractual obligations with high cost nonutility generators.

In the past, utilities constructed large, centrally located plants to gain economies of scale in producing electricity. Extremely long construction lead times and overly aggressive demand forecasts caused management to err on the side of oversupply to meet customer demand. Furthermore, the monopoly environment meant utilities lacked a strong incentive to contain costs. Indeed, the larger a utility's rate base was, the more investment on which the utility could earn a return. In addition, costs were exacerbated by circumstances. The last round of base-load construction occurred in the late 1970s and early 1980s, which was an era of high inflation and high interest rates. Finally, the nuclear incident at Three Mile Island in 1979 resulted in heightened Nuclear Regulatory Commission supervision, extending the timetable for plant completions and elevating capital costs significantly.

Since that time, new technologies have greatly reduced the cost of building generating facilities. Even more importantly, the economics of building smaller plants have continued to advance. The lead time for construction has been drastically reduced, from as much as 10 years to as little as 18 months. This reduction is in part due to the construction of much smaller-scale highly efficient plants. As a result, the cost of incremental generation today is significantly lower than the embedded cost of plant of most utilities. The differential is most evident in nuclear plants. For instance, the 1,143 megawatt (MW) Nine Mile Point 2 nuclear plant, operated by Niagara Mohawk Power, was completed in 1988 at a cost of about $5,000 per kilowatt (kW), after a construction period of more than 10 years. This compares with a 500 MW gas-fired combined-cycle plant today that can be built in about 18 months at a cost of $450 to $550 per kW. While prudency hearings did lead to significant write-offs during the rate base proceedings of Nine Mile Point 2, the bulk of these costs were simply included in rates and are now being recovered from customers over a lengthy period of time.

Developments in Industry Environment

The enactment of the National Energy Policy Act of 1992 (NEPA) marks the beginning of the end of the last major government-protected monopoly. NEPA authorized the Federal Energy Regulatory Commission (FERC) to mandate

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that utilities become open-access common carriers for wholesale electric sales, known as wholesale wheeling. Wholesale sales are bulk power sales between utilities or between a utility and a third-party producer. If two utilities are not interconnected, they would need access to a third party's transmission network to complete such a transaction.

The ability of a utility to sell power to an end user that is not within its franchise service territory, or the sale of power from an independent power producer to an end user, is called "retail wheeling." Currently, utilities are not permitted to engage in retail wheeling. However, retail customers, aware that there may be cheaper power sources than their current supplier, are pressuring state regulators to permit them to buy power from alternative suppliers. While most regulators agree that competition will lower the price of power, some assert that the objective is not merely to lower rates, but to provide customers with the option to choose their power provider. The vast majority of utilities and regulators concur that retail wheeling is inevitable, so states have had to grapple with how to make the transition from a regulated to a competitive environment. As mentioned earlier, many states have passed laws to phase in direct access to all customers and most of these legislative initiatives include securitization of stranded costs as a means of reducing utilities' financial exposure to a competitive retail environment.

Recovery of Stranded Costs

Vertically integrated electric utilities provide customers with three basic functions: generation, transmission, and distribution. Because of legal, regulatory, and technological advances, generation no longer displays monopoly characteristics. Transmission and distribution, or the "wires" function, on the other hand, will likely remain natural monopolies for the foreseeable future since it would be prohibitively expensive, and environmentally difficult, to construct redundant wires. Transmission consists of the high-voltage system that moves power in bulk from generating plants to an electric distribution system or a load center. Distribution receives stepped-down power, which is then transported at lower voltages to individual end users.

As part of various state legislative initiatives, utilities are being required to functionally, if not legally, disaggregate the vertically integrated components of their business. The costs of each function will be determined and itemized, or "unbundled," on customers' bills. While customers may purchase the actual electrons from a source other than their local utility, they must continue to transport this power over the distribution wires owned by their local utility. The local utility will use its wires system to charge customers for the services it provides, which will include transmission of power bought from other suppliers. Other services, such as billing and metering, could be maintained by the utility or could be opened to competition as well. Any stranded cost that is identified, isolated, and by mandate recoverable in utility rates, will also be recovered as a "wires charge;" it cannot be recovered as part of a generation charge, since customers may purchase generation from an alternative source.

Stranded costs, which have been realized as such only with the prospect of a competitive market, are included in current utility rates, but they are being amortized over as long a period as 30 to 40 years. Utilities need to accelerate the recovery of these above-market costs as quickly as possible if they are to lower their rates in preparation for a competitive environment.

Statutory Securitization of Stranded Costs

Until now, securitization of stranded assets has been made possible by state statute. In general, such statutes provide that the stranded assets themselves, plus interest on any bonds backed by stranded assets, the costs of servicing the

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bonds, and the costs of bond issuance all be collected through imposition of a tariff that is collectible from the utility's customers. While differing in particulars, the legislation in Pennsylvania, California, Illinois, Massachusetts, Texas, Connecticut, New Jersey, and elsewhere shares certain characteristics that are significant from a rating perspective.

The statutes specifically provide for securitization of the stranded costs through their sale to a financing subsidiary, and ultimately, to a trust that issues the bonds. The statutes award true sale status to the transfer of the stranded assets to a finance subsidiary. This should help support the legal conclusion that the transfer constitutes a true sale for bankruptcy purposes.

The statutes also provide that any proposal for a securitization of stranded assets be approved on an irrevocable basis by the relevant utility regulatory commission. The commission must set a tariff schedule. A tariff would be included in the ordinary bills sent to customers, and would amortize the stranded assets over the life of the proposed securitization. The tariff would be a separate itemized charge on the customer's bill, and could be either a fixed charge or tied to electricity usage, in either case included in the utility's wires charge. In scheduling the tariff needed to amortize the assets fully, the commission will take into account the utility's forecast regarding the projected size and demographics of its customer base. Where the tariff is tied to electricity usage, predicted customer usage will be important.

The tariffs that are actually collected from customers may fall short of what was originally anticipated. In addition to defaults in bill payments, the customer base might decline due to economic and/or technological factors, or usage might vary from what was originally predicted. This might happen, for instance, if the winter is unusually warm or the summer particularly cool. These are credit risks that could impact the ability of the tariff to amortize the assets fully. To address these risks, the legislatures have created a statutory form of credit support, known as the "true-up" mechanism. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers, so that the bond amortization schedule is met. This minimizes credit risk, except in the tail end of the transaction after the final true-up has occurred. Liquidity risk will, of course, exist during the periods between true-ups, to the extent that collection shortfalls occur.

The true-up mechanism also may effectively minimize prepayment risk. While there may be a tariff collection shortfall, it is also conceivable that excess collections may be received. This might occur, for example, if the customer base grows at a greater rate than originally anticipated when the tariffs were established. If collections exceed expectations for a particular period, the true-up mechanism could potentially reduce the remaining tariffs accordingly, so that the remaining transaction amortizes as scheduled.

When the utility applies for a true-up, the commission may not grant it immediately. The commission's delay will add to liquidity risk, because the shortfalls in collections to be remedied by the true-up will last for a longer period, until the commission finally grants the true-up. A delay by the commission will not create credit risk during the transaction, because once the true-up is in place, the adjusted tariff will take into account any collection shortfalls caused by its delay. But a delay in the true-up could result in a credit loss at the tail end of the transaction. The commission might take so long to grant the true-up that the final true-up never occurs. The statutes prevent this potential credit loss, as well as limit liquidity risk caused by a delay, by setting a deadline for implementation of the true-up. For example, California requires that the commission implement a true-up within 90 days of each anniversary date of the

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transaction. Other statutes simply require that the true-up filing with the commission becomes effective as early as the subsequent month.

The duration of these transactions and the ability to impose true-up periods and tariff collections indefinitely depend initially on whether the statutes impose a limit on how long the tariff may be collected from the utility's customers. Even where no limit is set as a statutory matter, the final true-up period, and the deadline for tariff collection, will depend on the legal final maturity date set for the bonds.

A utility might change hands for some reason, or file under Chapter 11 of the U.S. Bankruptcy Code. Such an event could strike at the heart of a potential securitization. Stranded assets will not be recovered unless the utility continues to provide electricity, bill its customers, transfer the tariff to the securitization trust, and apply for true-ups when necessary. The statutes address this problem by requiring that any successors to the utility, whether through bankruptcy, merger, or sale, must perform all of the utility's obligations in connection with the securitization.

The statutes provide another feature, by providing that, contrary to what would usually occur under the Uniform Commercial Code (UCC), there is a continued security interest in collections that have been commingled with other funds of the utility. This eliminates the usual credit risk associated with commingled funds in the event of a bankruptcy of the utility, although it fails to alleviate the liquidity risk and potential credit risk caused by the automatic stay (see Protection Against Credit Risk Caused By Commingling).

Finally, the statutes purport to create new property interests that must be perfected in a manner different from a UCC security interest. However, there is the possibility that stranded assets might still be considered subject to the prior lien of existing mortgage bonds. As a result, proceeds of the securitization might need to be applied to pay down the debt secured by the prior lien. This would, in any event, be positive from a credit perspective, because the bonds being retired (typically general obligation bonds bearing the rating of the utility) would have a higher interest rate than the 'AAA' rated securitized bonds used to retire the obligations.

Significance of Statutory Securitization

To date, stranded cost securitizations rated by Standard & Poor's have been based on legislation promulgated specifically for that purpose. Nevertheless, Standard & Poor's understands that, as a regulatory matter, state public utility commissions have, de facto, historically permitted recovery of stranded costs through rate adjustment.

While public utility commission regulatory action may well be sufficient to accomplish a securitized recovery of stranded costs, Standard & Poor's believes that there may be certain advantages to a legislation-backed securitization. Statutes have the benefit of having undergone the political process. Affected interests are given the opportunity to introduce, and argue for, their respective views. Hearings, drafting and amendments, floor debate, and overall legislative, and press and public scrutiny is the process by which political compromise is achieved and consensus built. The political process is viewed as investing the resulting legislation with a considerable degree of stability and support.

Viewed from the perspective of legal capacity, legislation has other advantages. At the heart of stranded cost securitization is the creation of a property right in the transition charges that serve as the basis for debt service. While it is clear that state legislatures are empowered by due process of law to create property rights, and to define and record how these rights are to be enjoyed, the ability of a state public utility commission to achieve the same end by

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regulatory compact may not be as certain.

Statutory status provides both constitutional and political protection against the risk that the creation and pledge of securitization property might be impaired by subsequent amendment. Historical precedent indicates that a legislature is unlikely to reverse itself once it has enacted a statute. Even if a political reversal were to occur, the Pennsylvania, Massachusetts and California statutes recognize that the bondholders possess certain constitutionally protected rights. Both statutes provide that if the right to recover stranded assets is compromised in any way, the bondholders are entitled to adequate compensation.

Nevertheless, in jurisdictions where public utility commissions may reasonably be viewed to have the capacity and authorization to order a recovery of stranded costs through a securitization-type procedure, and in which the commission has a stable history of consistent regulatory action, and in which the courts have paid regular deference to commission order, Standard & Poor's will consider regulatory-based recovery procedures case by case. However, any such consideration will necessarily involve a comparison by Standard & Poor's of the proposed regulating action and its enactment in contrast to rated, statute-based recovery plans.

Overview of Stranded Cost Securitization

Differences From Traditional Asset-Backed Transactions

Several key aspects differentiate the securitization of stranded costs from the securitization of more conventional asset types.

Cash Flow Receivables In a typical securitization, the originator of the assets transfers a pool of receivables to a trust and receives payment based on an agreed-upon value for those receivables. The key in this case is that the receivables have already been created. In contrast, stranded assets are not traditional receivables. Although the statutes create a present property right to future collection there is no initial cash flow backing the debt. Stranded assets represent the present right to the cash flow from receivables that will be created in the future when performance, in this case power generation and delivery, has been provided. But until this performance by the utility company takes place, the customer is not obligated to make any payments. Power generation is thus critical to assure full and timely payment to securityholders. As a result, there is a greater dependence on the utility as seller/servicer to do more than just collect payments on existing receivables and liquidate collateral to the extent needed.

Dependence on Servicer Servicer bankruptcy filings generally cause a change in servicer in most asset-backed transactions to prevent any disruptions in the required servicing and collections on the portfolio. Therefore, a substitute servicer must be ready and willing to take over all servicing responsibilities, if necessary. But unlike in typical securitizations, the transaction cannot fully rely on a substitute servicer. A utility does not just collect payments; it must continue to provide power. Because provision of electricity is fundamentally a necessary service, however, Chapter 7 liquidations are unlikely. In contrast, utilities will continue to operate in Chapter 11 reorganization, and thus, provide power and enforce collection from customers. Security is provided by the statutory mandate that collection obligations must be assumed by any successor corporation, including successors pursuant to reorganization, or otherwise. Due to the regulated nature of the industry a state-by-state review of successor servicing arrangements will be performed by Standard & Poor's.

True-up as Credit Support Credit support is entirely structured within the finances of the typical securitization. In contrast, in these transactions credit support has been provided by the statutory true-up mechanism. The parties must initially come up with a proposed amortization schedule. This schedule determines the tariff to be charged to recover

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the stranded costs, as well as the costs of the securitization itself. In setting this tariff schedule, the utility makes certain assumptions about charge-offs and sales over the following year or even decade. These assumptions will necessarily be inaccurate, especially as the date of forecast becomes increasingly remote. As a result, the stranded costs collected from customers could be less than those needed to repay the bonds. The true-up addresses this risk. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers. This effectively eliminates credit risk, except in the tail end of the transaction after the final true-up has occurred.

It should be understood that the true-up is not quite the same thing as an unlimited cash collateral account. Because the true-up will only be as good as collections in the following year, the amount of a current year's shortfall will not be fully recovered in the next year, due to charge-offs and forecast error occurring in that year. The amount will decrease over time, however, as successive true-ups are implemented. Where statutes do not place a limit on the tenor of the bonds and permit indefinite true-ups, the legal final maturity can simply be extended as a structural matter to gain the benefit of additional true-ups. This allows for as many true-ups as necessary to reduce the shortfalls that cannot be collected because they occur in what may have been originally contemplated as the final year of the transaction.

The true-up can make the amortization schedule for the bonds more predictable, unless dramatic consumption changes occur. This is because the true-up may adjust the amount payable to the trust by the customer base to the extent that there has been a shortfall or surplus in the prior period.

Perfection Mechanisms As stated above, the statutes provide for their own methods and location for filing and perfecting stranded assets. This may or may not result in the conclusion that stranded assets are new property interests not subject to UCC filing and priority rules, and thus are not subject to prior liens under the UCC.

Overcollateralization as Additional Credit Enhancement As mentioned earlier, the true-up mechanism will play an integral role in the transaction structure. The frequency of the true-up, for example, will influence the need for additional credit enhancement. Overcollateralization is the most likely form of credit support. Overcollateralization would cover the risks in the stub period following the final true-up, as well as make up for past shortfalls in collections that were never fully trued-up in the past.

Sale Accounting and FAS 125 Stranded cost securitizations do not possess sale status as an accounting matter under FAS 125. The Security Exchange Commission's Office of Chief Accountant has indicated that while the utilities may be able to sell the right to recover stranded costs as a legal matter, they will not be able to remove the assets (and associated debt) from their balance sheets under FAS 125. Nevertheless, as long as the transaction is structured as a true sale for legal purposes, Standard & Poor's will "back out" for analytical purposes nonrecourse debt and associated carrying costs from the utility's consolidated financial statements. While off-balance-sheet treatment would have enabled a more clear-cut analysis, Standard & Poor's will attempt to recognize the economic (as opposed to the accounting) reality.

Debt for Tax Treatment Any utility intending to securitize stranded costs will likely seek a private letter ruling from the IRS that states that the sale of the assets constitutes a "debt for tax transaction." In other words, the sale would not result in the immediate recognition of income. If the sale were deemed to provide immediate income, the utility would incur an immediate tax liability as well. This would destroy the economics of a securitization.

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The Rating Approach

Specific credit and legal risks that arise in securitizing stranded costs are addressed below. Standard & Poor's pursues a general rating methodology that attempts to stress in cash flows the ability of the true-up mechanism to ensure timely payment of interest and repayment of principal. In addition, it attempts to determine the number of true ups needed to meet these payments, that is, the structure's ability to meet its legal final maturity.

Credit Risks

Inaccuracy in Forecasting As mentioned earlier, the funds necessary to pay the stranded assets of the issuer are dependent on the tariff set by the commission and collected from the utility's customers. Tariff schedules are compiled for each customer class so that, taken together, the tariffs charged will amortize the stranded assets over the life of the securitization, while making timely interest payments. The tariff amounts themselves are based on estimates of cash flows to be collected from the customer base. The tariff amounts are thus determined based on such factors as the utility's forecast of population growth or decline, and seasonality in expected usage.

A shortfall in tariff collections can be caused by lower than expected usage due to:

Unanticipated customer migration (anticipated migration is included in the forecasting). Residential and small business customers are considered low risk in terms of customer migration. Large industrial customers, on the other hand, are considered a significant risk that requires additional stress to the cash flows (see Cash Flows). Additionally, as the term of transition bond issued exceeds the 6-8 years historically seen, technology driven customer migration increases significantly and begins to impact usage from commercial and small business customers.

Unanticipated weather conditions. Seasonal weather fluctuations are studied, and typically accounted for in setting the tariff charge.

Forecast error negatively impacts liquidity on the bonds and may "push out" the maturity of the bonds by requiring additional true-ups before the bonds can be paid out. To capture this risk, historical forecasting error is stressed at a certain multiple depending on the rating sought.

Where the tariff is recoverable from large industrial and commercial customers, Standard & Poor's will require data stratifying these customers by revenues generated. The cash flows will be additionally stressed to account for a potential loss in revenues caused by relocation of those customers with a high concentration risk in revenue generation for the utility.

Certain states have legislated rate caps on either the transaction charge for specific customer classes or on the total customer charge (i.e. through mandated rate reductions). Standard & Poor's will review the cash flow models to confirm that these rate caps are respected in stress scenarios.

Higher-Than-Expected Charge-Off Experience Like other forecasting variables, anticipated charge-offs are included in forecasting for purposes of setting the tariffs. Charge-offs may be higher than expected based on historical experience due to a variety of factors, including economic changes and unforeseen disasters. To account for this risk, charge-off history is stressed by the multiple relevant to the rating sought.

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Commingling by Aggregators The recent mandated unbundling of generation, transmission, and distribution charges has paved the way for alternative generation suppliers. The consumer may choose to purchase its generation services from an alternative supplier, while continuing to pay transmission and distribution (wires charge) to the utility. As discussed earlier, the tariff would be included in the wires charge, so that collection of the tariff itself would not be endangered by the existence of competition for generation services. However, commingling risk could exist as a result of potential billing arrangements for the utility's transmission and distribution services on the one hand, and the alternative energy provider's generation services on the other.

Generally, alternative energy service providers (retail electric providers; third-party servicers) may provide a consolidated bill for their generation services and the tariff owed to the utility. Where this is the case, the energy services provider is liable to pay the tariff regardless of whether it has received collections from the ultimate users. As a result, the securitization is exposed to commingling risk, and the resulting loss of commingled tariffs, in the event of the bankruptcy of an energy services provider.

This risk can be mitigated by certain restrictions on the length of time that an energy services provider may commingle funds before consolidated billing and service is terminated. If the energy services provider becomes delinquent, direct and consolidated billing may cease and service and separate billing to the end-user customer would be made up for the tariff. This means that the aggregator could commingle funds for a number of days before consolidated billing were terminated. To address this risk, Standard & Poor's stressed cash flow runs eliminate one month of collections per year at the utility's peak billing cycle.

This or other risks involving alternative energy providers may exist in other stranded cost securitizations. Standard & Poor's will assess these risks and the resulting necessary cash flow stresses on a case-by-case basis.

Estimate of Tariff Based on Collections Curve Generally, utilities are unable to allocate amounts received to various charges on the bill, so they were unable to calculate what percentage of collections constituted tariff collections. To address this problem, the utilities prepared forecasts of the percentages of amounts expected to be received during each of the following six months. These forecasts were based on collections curves developed periodically based on accounting studies and collections studies performed by the companies. For each monthly billing period, collections were estimated over six months based on the collections curve.

When the actual tariff remittances by customers are calculated (on the seventh month following each monthly billing period), either too much or too little may have been paid for that billing period. If the amount remitted has been less than the actual tariffs collected during that six-month period, the shortfall will be made up the following month out of the servicer's (the utility's) own funds. Thus, if the servicer is bankrupt (Standard & Poor's assumption), there is a risk the bondholders will lose that portion of the tariff. If the actual tariff amount has been less than the estimated tariff collections remitted to the trust, the servicer would be entitled to withhold the excess amount paid from the next month's remittances.

It is not clear whether this risk will be present in other securitizations. To date, the risk of lower-than-actual remittances has not been separately stressed in the cash flow runs. The one month of lost collections (see Commingling by Aggregators) has been sufficient to cover this risk. Standard & Poor's also has relied on data provided by the company showing relative lack of volatility in the collections curve.

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Higher Tariff An increase in tariff resulting from higher true-ups might become burdensome to consumers. This risk might have a spiraling effect, because greater charge-offs or customer migration or decreased usage might result, which in turn would result in the need for increased true-ups. Standard & Poor's will assess this risk by examining the highest per kWh tariff charge reached under the relevant stress scenarios. This risk increases as the term of the transaction increases to 10-15 years given greater technological/migration risk.

Cash Flows Two cash flow runs are generally required in rating stranded costs: a compounding forecast error run and an oscillating forecast error run, implementing the stress scenarios described below. These runs are created to test liquidity as well as the transaction's ability to meet the final maturity of each class of bonds in the transaction. They do so by creating scenarios where the true-up in the tariff amount (the reset of the tariff to reflect prior experience with actual collections and recover prior shortfalls in collections) continuously fails to reflect actual collections.

Compounding Forecast Error Run The compounding forecast error run assumes a compounding stressed error in forecasting resulting in a continual decline in actual tariff collections over what was forecast for that year. Assume, for example, that during year one, sales are 90% of the original sales forecast, that is, forecast error reflecting a multiple of the average forecast error for the customer class, where actual collections are less than expected collections.

At the end of year one, the tariff charge is recalculated assuming that year two customer sales will be what was experienced in year one, that is, 90% of the original expected forecast. Instead, year two sales are only 81% (90% of 90%) of the original sales forecast.

The sales decline is generally based on a multiple of the absolute value of the largest historical non-weather-normalized forecast variance by customer class. This compounding is assumed to continue from year to year over the life of the transaction.

Oscillating Forecast Error Run The oscillating forecast error run assumes a scenario where in one-year tariff collections exceed expectations, so that in the following year, the tariff is reset based on the prior year, only to experience a shortfall in actual collections. Assume for example that the appropriate stressed forecast error is 10%. During year one, sales are 90% (10% below) the original sales forecast. At the end of year one, the tariff is recalculated assuming that year two sales are also 90% of the original forecast. Instead, year two sales are 99% (110% of 90% level) of the original forecast. The tariff for the following year is reset assuming 99% of original forecast collections, only to receive 90% of originally forecast collections. This oscillation between 90% and 99% of original forecast is assumed to continue over the life of the transaction.

Legal Final Maturity The legal final maturity dates on stranded cost transactions are often set at up to two years beyond expected maturities. This additional period acknowledges the long-term nature of the liabilities being rated, and the corresponding possibility that fundamental changes in technology might take place that further stress the transaction in an unforeseen manner. One currently known possibility is that over time customers may increasingly switch to self-generation, which would enable them to cease paying the wires charge and thus, the tariff. Certain transactions have reduced this period by requiring more frequent (e.g. monthly) true-ups during the final year or two of the transaction.

Legal Risks

Reliance on Commission to Implement True-Up, and Potential Delay in Approving the True-Up Standard & Poor's believes that so long as the statute clearly specifies the maximum period before which the commission is compelled to implement the true-up, any shortfall in collections resulting from the delay can be sized and factored into the cash flow projections. Certain structures may permit the application of principal collections as liquidity for any interest payments due to noteholders during any true-up delay. In the absence of such features, adequate provision for liquidity and additional credit support should be demonstrated to Standard & Poor's.

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Adequate Provision Law permits alteration or limitation of right to transition property and right to collect tariffs if "adequate provision" is made to the bondholders. Although there has been no conclusive demonstration as to what constitutes "adequate provision," and how such alteration or limitation would affect timely interest and principal payments on the bonds, Standard & Poor's, in rated transactions, has received legal assurances that any such alteration would be constitutionally prohibited were it substantially to impair the security for the bonds. While such assurances do not really define adequate provision, Standard & Poor's believes, in practice, that adequate provision should prove to be the functional equivalent of the pledged transition property.

Stranded Assets to Aid Industry Restructuring

Securitization of stranded assets provides an efficient method electric utilities can use to quickly free themselves from the high cost of stranded assets that prevents them from becoming players in the emerging competitive retail generation market. At the same time, the statutory true-up mechanism provides strong credit support that has withstood 'AAA' stress criteria applied by Standard & Poor's.

Related Criteria

- Post-Default Ratings Methodology: When Does S&P Global Ratings Raise A Rating From 'D' Or 'SD'?, March 23, 2015
- U.S. Public Finance: Electric And Gas Utility Ratings, Dec. 16, 2014
- Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings, Oct. 24, 2013
- Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
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Version 3

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A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.

PART II
FAIR ADJUSTMENT

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

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Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

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Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

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i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the

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applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

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Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

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2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

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1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

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FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

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(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

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PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an

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adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

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Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

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2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

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Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

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Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

Non-application, Financial Administration Act, s. 28[7]

37xx. Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[7] Note - see s. 51 of the Electricity Act, 1998

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[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

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1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

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[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From:	Whitfield, Tobias P. (MOF)
To:	Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Malle Hanslep (MOF); Michael Waterston (MOF)
Subject:	FW: Guarantee
Date:	Friday, April 21, 2017 5:23:57 PM
Attachments:	Fair Hydro Plan Act (April 20 2017) Consultation v3(MOF Legal Comments April 21).docx

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best

Toby

Tobias Whitfield
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Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best

Toby

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Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)

Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)

Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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Version 3

This confidential draft document is provided for discussion purposes only. It should not be construed as representing the position adopted by the Government of Ontario on any of the topics included or not included in this document. The notes included in this document are intended only to help facilitate a discussion of the topics to which they relate. Any potential legislation is subject to the approval of the Ontario Legislature.

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A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

~~(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.~~

(1) The Lieutenant Governor in Council may by order authorize the Minister of Finance, on behalf of Ontario, to agree to guarantee or indemnify,

(a) any debts, obligations, securities or **[undertakings][NTD: Does this cover the performance guarantee, and how does the Province have the authority to cause the LDCs to do what is required for the collection of the amounts, or are there issues with replacement/taking control of the activities of the LDCs?]** of the **[financial asset owner].**

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Terms and conditions
(2) In respect of a guarantee or indemnity authorized under subsection (1), the Lieutenant Governor in Council may fix such terms and conditions as are considered advisable or may authorize the Minister of Finance, subject to any maximum liability specified for the guarantee or indemnity by the Lieutenant Governor in Council, to determine the terms, conditions and amount on which the guarantee or indemnity will be given.

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PART II
FAIR ADJUSTMENT

Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall

ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may

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be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

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True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

    i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

    ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with

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subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

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2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

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Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be

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borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

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Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

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Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

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Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

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3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

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(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

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Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

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(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

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Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

~~**Non-application, Financial Administration Act, s. 28**~~[7]

~~**37xx.** Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.~~**[NTD: We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.]**

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

[7] ~~Note – see s. 51 of the Electricity Act, 1998~~

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(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to

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facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a

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subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From:	Anna Strathy
To:	David Peters; James Devine; Ken Kandeepan; Mike Manning; Opal Kandelas; Bonnie Lemcke
Subject:	FW: House Book Updates due April 28, 2017
Date:	Tuesday, April 18, 2017 11:13:11 AM
Attachments:	Index by program area - Spring 2017 Index .doc

Good morning,

Communications has asked us to update our CINs to reflect the language of the 2017 Budget. Could your teams please review the following CINs and update as needed?

1. Borrowing and Debt
2. Ontario Credit Rating
3. Green Bonds
4. DBRS Response to the Fair Hydro Plan

Please send your updated CINs to me **by Tuesday, April 25 for CEO review**. The CINs will not be sent to Communications until Friday, April 28, after the release of the Document.

Thanks, Anna

From: Pichette, Marc (MOF) [mailto:Marc.Pichette@ontario.ca]

Sent: Thursday, April 13, 2017 2:22 PM

To: Anna Strathy ; Gavin He ; Edwards, Malon (FSCO) ; Birks, Ryan (MOF) ; Ghufran Tarin (MOF) ; Jamie Buckland Foster (MCYS) ; Katz, Emily (MOF) ; Patel, Lesley (MOF) ; Vo, Kim (MOF) ; Julia Hancock (MNDM) ; Vivienne Skoberne (MOHLTC) ; Sadruddin Salman (MOF) ; Lucy Kang (MTO) ; Wallace, Julia (MOF) ; Jayne Harten (ENE)

Cc: @FIN-L-O-CSB-ISSUES

Subject: House Book Updates due April 28, 2017

Hi all,

Thanks once again for providing the Contentious Issue Notes (CINs) for the Spring House Book (see attachment of Index of CINs by Program Area).

The Minister announced today that the 2017 Budget will be tabled on Thursday, April 27th, MO expects the CINs to be updated to reflect the new language of the 2017 Budget.

Therefore we would like to get an update of the CINs impacted by the Budget by Friday, April 28th.

Please send the updated notes to my attention.

Marc Pichette
Team Lead – Issues Management
Communications Services Branch
Ministry of Finance
(416) 314-1587

MINISTRY OF FINANCE
SPRING 2017 HOUSE BOOK BY PROGRAM AREA

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(n: fin-inst\pensions\TPP_financial1)

66. **Pooled Registered Pension Plans**
(n: fin-inst\pensions\pooled_registered_plans1)

67. **Canada Pension Plan Enhancement**
(n: fin-inst\pensions\CPP_enhancement1)

68. **Public-Sector Single-Employer Pension Plans**
(n: fin-inst\pensions\public-sector_single-employer1)

69. **Investment Management Corporation of Ontario (IMCO)**
(n: fin-inst\pensions\investment_mgt_corporation1)

70. **Target Benefit Pension Plans**
(n: fin-inst\pensions\target_benefit1)

71. **U.S. Steel Canada (Formerly Stelco) Pension Plans – Andrea Arbuthnot/Alan Veerman (lead)**
(n: fin-inst\pensions\US_steel1)

72. **The Retirement Savings Problem**
(n: fin-inst\pensions\reitrement_undersaving1)

73. **Essar Steel Algoma Inc.**
(n: fin-inst\pensions\essar_algoma1)

74. **Conversions and Mergers of Public Sector Single-Employer Pension Plans Into Existing or New Jointly Sponsored Pension Plans**
(n: fin-inst\pensions\SEPP_JSPP_conversions1)

75. **Ontario's Employment Insurance Concerns**
(n: fed-prov\EI_concerns1)

76. **30 Per Cent Rule – Pension Fund Investment Restrictions**
(n: fin-inst\pensions\30_per cent_rule1)

77. **Solvency Funding Relief And Solvency Funding Reform**
(n: fin-inst\pensions\solvency_funding1)

78. **Multi-Jurisdictional Pension Plans Agreement**
(n: fin-inst\pensions\multi_jurisdictional_pension_plans1)

79. **Pension Advisory Committees (PACs)**
(n: fin-inst\pensions\pension_advisory_committees1)

80. **General Motors (GM) Pension Plans**
(n: fin-inst\pensions\GM_pension_plans1)

81. **Sears Canada Inc. ("Sears") Registered Retirement Plan ("The Plan")**
(n: fin-inst\pensions\sears1)

FINANCIAL SERVICES POLICY DIVISION – LUCY KANG (A)
(AUTO INSURANCE, SECURITIES, CREDIT UNIONS AND MORTGAGE BROKERS)

82. Review of the Credit Unions And Caisses Populaires Act, 1994
(n: fin-inst\credit_unions1)

83. Co-operative Corporations in Ontario
(n: fin-inst\co-op_corporations1)

84. Financial Services Regulatory Authority of Ontario
(n: fin-inst\FSRA1)

AUTO INSURANCE

85. Keeping Auto Insurance Affordable
(n: fin-inst\insurance\auto\rate_reduction_strategy1)

86. Auto Insurance and The Sharing Economy
(n: fin-inst\insurance\auto\UBER_sharing_economy1)

87. Auto Insurance Reforms
(n: fin-inst\insurance\auto\auto_insurance_reforms1)

SECURITIES - SADRUDDIN SALMAN

88. Cooperative Capital Markets Regulatory System
(n: fin-inst\securities\CCMR1)

89. Securities Regulation and Enforcement
(n: fin-inst\securities\enforcement1)

90. Regulation of Financial Advisory and Financial Planning Services
(n: fin-inst\securities\financial_planning1)

91. Women on Boards and in Senior Management
(n: fin-inst\securities\gender_diversity1)

92. Consultation on Best Interest Duty
(n: fin-inst\securities\CSA_consultation_best_interest1)

93. CSA Consultation on Embedded Commissions
(n: fin-inst\securities\mutual_fund_fees1)

94. Financial Technology (FinTech) Sector in Ontario
(n: fin-inst\securities\FinTech1)

95. CRM2 Cost and Performance Reports
(n: fin-inst\securities\client_relationship_model1)

96. SRO Enforcement Powers
(n: fin-inst\securities\SRO_enforcement1)

REVENUE AGENCIES OVERSIGHT – JULIA HANCOCK / VIVIENNE SKOBERNE
ALCOHOL AND GAMING POLICY

ALCOHOL POLICY

97. Supports for Ontario VQA Wine
(n: alcohol&gaming\alcohol\VQA_wine_supports1)

98. LCBO Modernization
(n: alcohol&gaming\alcohol\LCBO_modernization1)

99. Interprovincial Sales Of Beverage Alcohol
(n: alcohol&gaming\alcohol\interprovincial_sales1)

100. Alcohol Retailing: Social Responsibility Measures
(n: alcohol&gaming\alcohol\social_responsibility1)

101. LCBO Cost-of Service Differential and CETA
(n: alcohol&gaming\alcohol\CETA&COSD1)

102. Sale of Beer and Wine in Grocery Stores in Ontario
(n: alcohol&gaming\alcohol\beer&wine_sales_grocery_stores2)

103. Changes to Minimum Prices of Beverage Alcohol
(n: alcohol&gaming\alcohol\minimum_prices1)

104. Beer Tax/Mark-up
(n: alcohol&gaming\alcohol\beer_tax1)

105. Private Members' Bill (PMB) 53 – Growing Ontario's Craft Cider Industry Act, 2016
(n: alcohol&gaming\alcohol\craft_cider_industry_act1)

106. LCBO Special Occasion Permit Levy
(n: alcohol&gaming\alcohol\special_occasion_permit_levy1)

107. Distillery Store Tax
(n: alcohol&gaming\alcohol\distillery_tax1)

108. LCBO Store to Close for Health and Safety
(n: alcohol&gaming\alcohol\LCBO_larder_lake_store1)

109. Ontario Small Cidery and Small Distillery Support Program
(n: alcohol&gaming\alcohol\small_cidery_small_distillery_support1)

110. Georgian Bay Vodka Recall
(n: alcohol&gaming\alcohol\georgian_bay_vodka_recall1)

111. Private Member's Bill (PMB) 50 – Free My Rye Act, 2016
(n: alcohol&gaming\alcohol\free_my_rye_act1)

112. LCBO – OPSEU Arbitrator's Award
(n: alcohol&gaming\alcohol\LCBO_OPSEU_arbitrator_award1)

113. Private Member's Bill (PMB) – Liquor Statute Act (Sale of Spirits Manufactures for Brand Owners), 2017
(n: alcohol&gaming\alcohol\liquor_statute_act1)

114. Liquor Control Board of Ontario Labour Negotiations
(n: alcohol&gaming\alcohol\LCBO_collective bargaining1)

MARIJUANA

115. Legalization of Cannabis
(n: alcohol&gaming\marijuana\cannabis_legalization1)

GAMING POLICY

116. Problem Gambling
(n: alcohol&gaming\gaming\problem_gambling1)

117. Integration of Horse Racing Into the Provincial Gaming Strategy
(n: alcohol&gaming\gaming\horse_racing_integration1)

118. Modernizing Gaming in Ontario
(n: alcohol&gaming\gaming\modernizing_OLG6)

119. Ontario First Nations Limited Partnership Arbitration – Casino Rama
(n: alcohol&gaming\gaming\first_nations_CRRA_litigation1)

120. OLG's Third-Quarter Municipal Host Fee Payments
(n: alcohol&gaming\gaming\Q3_host-fee_payments1)

121. OLG 2015-16 Fourth-Quarter Gross Revenues
(n: alcohol&gaming\gaming\Q4_revenues1)

122. Internet Gaming in Ontario
(n: alcohol&gaming\gaming\internet_gaming1)

123. Charitable Gaming Revitalization
(n: alcohol&gaming\gaming\charitable_gaming1)

124. East Gaming Bundle Service Provider
(n: alcohol&gaming\gaming\east_gaming_bundle1)

125. Great Blue Heron Casino Transition
(n: alcohol&gaming\gaming\great_blue_heron_casino3)

126. OLG Modernization in Niagara
(n: alcohol&gaming\gaming\niagara_gaming_bundle1)

127. Gaming Ontario Website
(n: alcohol&gaming\gaming\gaming_ontario_website1)

128. OLG Lottery Modernization
(n: alchol&gaming\gaming\OLG_lottery1)

129. Municipal Role in Establishing a New Gaming Site
(n:\alcohol&gaming\gaming\municipal_approval1)

130. Cyber-Attack at Casino Rama
(n:\alcohol&gaming\gaming\casino_rama_data_breach1)

131. North and Southwest Gaming Bundles Service Provider
(n: alcohol&gaming\gaming\norht&SW_gaming_bundles1)

132. Ontario Auditor General Follow-up Report OLG Modernization
(n: alcohol&gaming\gaming\AG_report_OLG_modernization1)

133. Fantasy Sports Wagering
(n: alcohol&gaming\gaming\fantasy_sports_wagering1)

134. Long-Term Funding Strategy for Horse Racing
(n: alcohol&gaming\gaming\horse_racing_LT_funding1)

135. Ontario Lottery and Gaming Corporation's (OLG) 2015-16 Annual Report
(n: alcohol&gaming\gaming\OLG_2015-16_annual_rpt1)

136. Health and Safety Legal Action Against LCBO
(n: alcohol&gaming\alcohol\LCBO_fine1)

TAX
OFFICE OF TAXATION (OTAP) – LESLEY PATEL

137. Business Tax Competitiveness
(n: tax\biz_competitiveness1)

138. Moving Ontario Forward – Tax Revenue Measures
(n: tax\moving_ontario_forward_tax_measures1)

139. Apprenticeship Training Tax Credit
(n: tax\apprenticeship_training1)

140. Accelerated Capital Cost Allowance
(n: tax\accelerated_capital-cost-allowance1)

141. Film and Television Tax Credits
(n: tax\film&TV1)

142. Business Tax Support Measures
(n: tax\business_tax_support1)

143. Aviation Fuel Tax Increase
(n: energy\aviation_fuel1)

144. Retroactive Amendments To The Land Transfer Tax (LTT) "De Minimis" Partnership Exemption
(n: tax\LTT_de minimis_partnership_exemption1)

145. HST on Electric Vehicles
(n: tax\HST_electric_vehicles1)

146. Harmonized Sales Tax and Carbon Pricing
(n: tax\HST_carbon_pricing1)

147. Tax on Sugar or Sweetened Beverages
(n: tax\sugar_tax1)

148. Business Support Programs Review (BSPR)
(n: tax\business_support_programs_review1)

149. "Snow Washing" and Canada as a Tax Haven
(n: tax\Canada_tax_haven1)

150. Recent Provincial Measures to Improve Housing Affordability
(n: tax\housing_affordability1)

151. Incorporation of Real Estate Agents
(n: tax\tax_fairness_realtors_act1)

PERSONAL INCOME TAX

152. Personal Income Tax Comparison
(n: tax\income\PIT_comparison1)

153. Taxation of Trusts and Estates and Tax on Split Income
(n: tax\income\trusts&estates_split-income1)

154. Estate Administration Tax Regulation
(n: tax\income\estate_administration1)

TAX & BENEFITS ADMINISTRATION – JANE HARTEN (A)

155. Underground Economy
(n: tax&benefits\underground_economy1)

156. First Nations Gasoline Tax Exemption Program
(n: tax&benefits\FN_gasoline_exemption1)

157. Ontario's Tobacco Strategy
(n: tax&benefits\tobacco_strategy1)

158. Sharing Economy
(n: tax&benefits\sharing_economy1)

159. Electronic Sales Suppression
(n: tax&benefits\electronic_sales_suppression1)

160. Taxation of Electronic Cigarettes
(n: tax&benefits\e-cigarettes1)

161. Raw Leaf Tobacco Producers
(n: tax&benefits\raw_leaf_tobacco_producers1)

162. Land Transfer Tax – Life Leases
(n: tax\LTT_life_leases1)

163. Microbrewer Eligibility
(n: alcohol&gaming\alcohol\microbrewer_status_change1)

164. 2016/17 Tax Season Campaign
(n: tax&benefits\tax_season_campaign1)

165. Recovery of Overpayment of Corporations Tax Appeals Interest
(n: tax&benefits\recovery_overpayment_interest1)

From: Mike Manning
To: "Grant.Williams@bmo.com"
Cc: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Subject: FW: Key points / questions
Date: Monday, March 27, 2017 11:25:27 AM

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principal, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- The Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- The Province is involved in developing legislation, regulation and other policies to enable this structure
    - the Province is seeking outside expertise to help develop and review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications to this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in the spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement, and why?
6) What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott Nelms

From: Mike Manning
To: "Thom, Trevor"
Cc: ASHBOURNE, STEPHEN; Scott Nelms (ENERGY)
Subject: FW: Key points / questions
Date: Monday, March 27, 2017 11:23:01 AM

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principal, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- The Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- The Province is involved in developing legislation, regulation and other policies to enable this structure
    - the Province is seeking outside expertise to help develop and review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications to this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in the spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement, and why?
6) What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott Nelms

From:	Mike Manning
To:	Martine Bell
Subject:	FW: Key points / questions
Date:	Monday, March 27, 2017 11:09:53 AM

Hi Martine:
As discussed.
Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 11:01 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>
Subject: RE: Key points / questions

Thanks Mike. Glad to hear. I was thinking my email below was sufficiently cleaned up to be copied and pasted to be sent out. Do you need anything more from me?

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 27, 2017 10:59 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Subject: RE: Key points / questions

Thanks guys, email looks good. I've talked to TD, Scotia & BMO and they are all ok to proceed. If I get scott's cleaned up email, then I can send it to the dealers. Hoping we are good to go. We can then arrange times for Wednesday.

Regards, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 10:51 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Key points / questions

Thanks Steve. This makes sense. I have made your changes below, and have cleaned up the email so that it is ready to be sent around to the banks.

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: March 27, 2017 10:02 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Subject: RE: Key points / questions

Thanks Scott. This looks good to me. A few small thoughts:

1. First point… "electricity-related charges" rather than "electricity rates"

2. First point … "… it charges through to ratepayers …" (i.e., billings are through LDCs)
3. Second point … "principal"
4. Sixth point … " to help develop and review"
5. New language "… consider modifications to this structure …"
6. Timing … "the spring
7. Q3 … "cross-border."
8. Q4 … "experience with financing legislatively …"

On the questions, you might consider:

1. What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
2. Do you have experience with government accounting rules applicable to non-controlled legal entities?

Hope that's somewhat useful.

Regards, Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

———————————

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199 Bay Street, Suite 4000, Toronto ON M5L 1A9
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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 9:40 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: FW: Key points / questions

As per our conversation, please see the edits in red below.

From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: Key points / questions

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
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3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this

engagement, and why?

6) What are the key considerations for investors in purchasing “AAA” debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

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From:	Nelms, Scott (MOF)
To:	ASHBOURNE, STEPHEN; Mike Manning
Subject:	FW: Key points / questions
Date:	Monday, March 27, 2017 9:39:48 AM

As per our conversation, please see the edits in red below.

From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: Key points / questions

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

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- Province is involved in developing legislation, regulation and other policies to enable this structure
- ~~A key objective for the Province is to ensure that this structure is financiable with as little support / backstop as possible from the Government~~
    - the Province is seeking outside expertise to help review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications this structure over time, as circumstances and objectives change
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financing mechanisms, including cross-border particularly involving the public sector and utilities?
4) What is your experience with legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement and why?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

From:	Nelms, Scott (MOF)
To:	ASHBOURNE, STEPHEN; Mike Manning
Subject:	FW: Key points / questions
Date:	Monday, March 27, 2017 9:39:48 AM

As per our conversation, please see the edits in red below.

From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: Key points / questions

Good Morning,

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Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity rates to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
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- ~~A key objective for the Province is to ensure that this structure is financiable with as little support / backstop as possible from the Government~~
    - the Province is seeking outside expertise to help review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative

financing mechanisms, including cross-border particularly involving the public sector and utilities?
4) What is your experience with legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement and why?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

From: Mike Manning
To: James Devine; Carlos Yep
Subject: FW: Key points / questions
Date: Monday, March 27, 2017 8:52:09 AM

As discussed.
Mike

-----Original Message-----
From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: Key points / questions

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity rates by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts.
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principle, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- the Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- Province is involved in developing legislation, regulation and other policies to enable this structure
- A key objective for the Province is to ensure that this structure is financiable with as little support / backstop as possible from the Government
- the Province is seeking outside expertise to help review the proposed structure and legislative requirements provided by OPG and its advisors
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms particularly involving the public sector?
4) who (or what team) would you suggest as advisors to the Province for this engagement and why?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Mike Manning
To: "tim.vanalstyne@scotiabank.com"
Cc: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Subject: FW: Key points / questions
Date: Monday, March 27, 2017 11:29:34 AM

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principal, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- The Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- The Province is involved in developing legislation, regulation and other policies to enable this structure
    - the Province is seeking outside expertise to help develop and review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications to this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in the spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement, and why?
6) What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott Nelms

From: Mike Manning
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: James Devine; Carlos Yep
Subject: FW: Meeting tomorrow
Date: Tuesday, March 28, 2017 1:01:45 PM

For Your info.
Mike

-----Original Message-----
From: Tim Van Alstyne (Scotiabank GBM) [mailto:tim.vanalstyne@scotiabank.com]
Sent: Tuesday, March 28, 2017 12:22 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Mark Hadden (Scotiabank GBM) <mark.hadden@scotiabank.com>
Subject: Meeting tomorrow

Hi Mike
The team is confirmed for 11 AM tomorrow if that changes please coordinate with Mark. Coming from Scotia Bank will be Mark Hadden, Doug Noe managing director, head of securitization Greg Lawrence, managing director head of DCM energy And Derrick Chu Energy representative from investment banking.

Good luck and we'll chat on Friday.

Cheers

Tim

Sent from my iPhone
This e-mail and any attachments may contain confidential or privileged information. If you are not an intended recipient, do not re-send, copy or use this e-mail. Please also contact the sender immediately and delete this e-mail in its entirety. Privilege is not waived by reason of mistaken delivery to you. The Bank of Nova Scotia (Scotiabank) and its affiliates accept no liability whatsoever for loss or damage in relation to this e-mail and may monitor, retain and/or review email. Opinions expressed in this e-mail are those of the author and may not represent the opinions of The Bank of Nova Scotia (Scotiabank) and its affiliates. Trading instructions received by e-mail or voicemail will not be acted upon.

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From: LEE John -TREASURY
To: Mike Manning
Cc: RYFA Ken -TREASURY; LIU Sheen -TREASURY
Subject: FW: OEB Rates Reduction Options
Date: Thursday, December 22, 2016 2:36:24 PM
Attachments: DRP Financing Alternatives and Issues 2016 12 19 r2.docx

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Mike:

As discussed attached please find the document we shared with Ministry of Finance earlier this week

John

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DRP Financing – Alternatives & Issues

Objective

Reduce costs to the customer through lower rates for OPG energy.

General Approach

Total DRP expenditure to end of 2016 excluding interest is $3.2 billion. Interest capitalized is $0.2 billion.

Total OEFC debt at end of 2016 is $3.3 billion.

- OPG establishes a separate entity to perform the refurbishment – Nuclear Refurb Co ("Refurb").
- All incurred costs to end of 2016 on the DRP project are "sold" to Refurb.
- When each unit is removed from service to be refurbished the net book value of each unit is "sold" to Refurb.
- While OPG will likely still pay for the costs of refurbishment after 2016 the Refurb entity will be billed by OPG for these costs.
- Refurb will pay OPG by obtaining financing from the Province at a short term debt rate which for purposes of this discussion is assumed to be 1%.
- At the inception of this process Refurb will borrow $3.2 billion plus the NBV of unit 2 to fund the initial "purchase" of these assets which is paid to OPG.
- OPG will use these funds to redeem the existing OEFC debt with the result that OPG should have no OEFC debt.
- At the point each refurbished unit returns to service they will be "purchased" by OPG at the accumulated cost.
- The asset could be purchased along with an equivalent amount of short term debt with the result that no cash transfer is required between the entities. The short term debt would have to be transferable between OPG entities.
- The short term debt would continue until the total refurbishment project has been completed.

Significant concepts in this approach

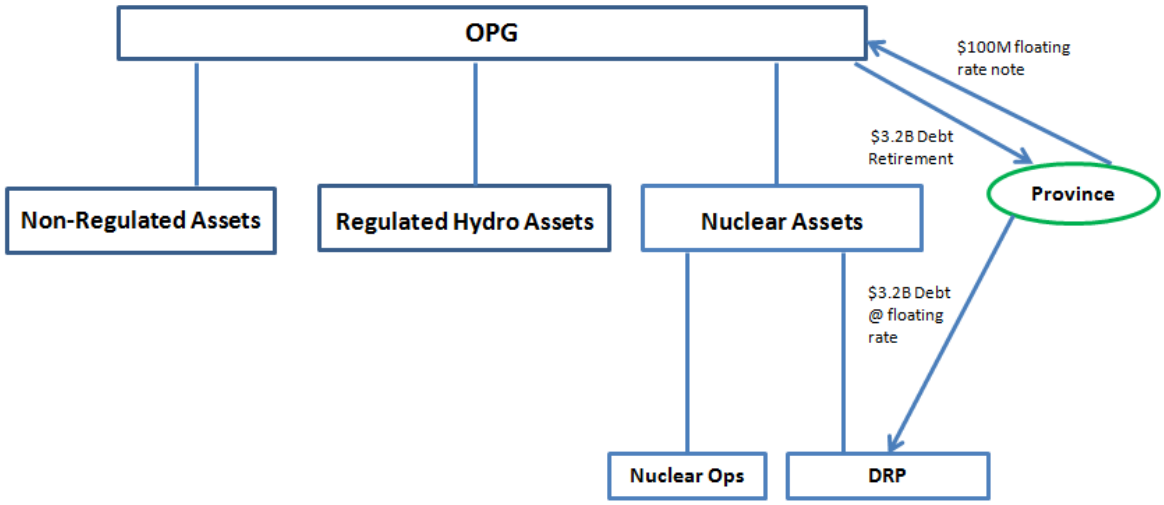
- The separation of DRP activities from OPG and funding these activities separately is important to maintain the stand-alone concept applied to OPG's capital structure for rate setting purposes.
- The stand-alone concept is important to OPG as it establishes the amount of equity capital OPG requires to fund regulatory assets on which OPG earns a return.
- If the structure did not support the stand-alone concept which could occur if it was simply a holding company then the regulator would look through the ownership structure to the capital structure of the parent (Province of Ontario) when setting the capital structure. Other regulated entities with this structure – BC Hydro and Hydro Quebec – have a very low equity component at about 25% to 30%. OPG's current capital structure for rate setting is 45% with the latest application requesting an increase to 49%.
- Removing the operating asset from rate base at the point of refurbishment is important to support the separation of refurbishment activities.
- The approach noted is similar in concept to sale and leaseback process commonly used in US regulatory environment.
- If OPG had no debt on which to base the cost of debt capital then the regulator would likely apply the OEB standard cost of debt capital which is currently at 3.7%.
- To substantiate a lower cost of debt capital which results in a greater savings to rate payers then OPG would borrow, say, $100 million under a short term floating rate note from the OEFC. Assume the term of this note is 5 years.
- The potential savings to rate payers from a low cost of debt capital is restricted by the rate-base value of operating assets. The nuclear operating assets of about $2.5 billion are approximately 25% of total OPG rate base of about $10 billion. Applying the low cost of debt capital to only the nuclear rate base would yield potential savings of about $50 million per year (cost of debt capital moves from 5% to 1%). Extending this concept to hydroelectric rates as well would increase these potential savings to about $200 million per year.

- Refurb could be initially capitalized with an amount of equity from OPG.
- At the end of the refurbishment period the floating rate short term debt would need to be replaced with longer term fixed rate debt. An agreement with the OEFC could be set up at inception to establish the process for replacing this debt. The process needs to be managed to consider the rate payer impact, that is, transition to new interest rates over a period of time. It is contemplated that the rate will be based on the average coupon rate of the Provincial debt outstanding and for the average term.

	2017	2018	2019
Total electricity system cost savings ($M)	150	200	250
Estimated residential customer savings ($/mo)	$0.40	$0.80	$1.20

Risks

- The OEB may still view this structure as contrary to the stand-alone concept although the risk would be reduced under this approach
- The change from short term floating rate debt to long term fixed rate debt may not be accepted by the OEB.
- Extending the low cost of debt to hydroelectric rates would need to be addressed through the incentive rate making approach.
- Province takes on the refinancing risk.



From: Mike Manning
To: James Devine
Subject: FW: OEFC equity infusions to OPG
Date: Wednesday, March 08, 2017 11:00:51 AM

Does this work for you? Let me know.

Thanks, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, March 08, 2017 9:53 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OEFC equity infusions to OPG

Thanks Ron, Mike. Looks like 3:30-4:30 is the timeslot that works for everyone. Ron, if you have to drop off at 4 that's ok. This is likely the first of many conversations.

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: March 8, 2017 8:40 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Re: OEFC equity infusions to OPG

Hi Scott,

Sure. Preferably between 1 and 4.

Ron

On Mar 8, 2017, at 8:18 AM, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca> wrote:

> Hi Mike, Ron,
>
> OPG has asked to meet with the Province to talk about financing arrangements for the Fair Hydro Plan. Gadi suggested that you would be the appropriate points of contact for this stream of work. I know this is short notice, but wonder if you might have availability to start the conversation with OPG this afternoon. I am going to pull in Energy staff as well and will send around an invite once we find a time that works.
>
> Thanks,
> Scott
>
> Scott Nelms
> Electricity Investment and Governance Secretariat | Ministry of Finance
> 7th Floor | 375 University ave. | Toronto, ON

w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

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From: Gadi Mayman
To: Mike Manning; Ken Kandeepan; Ronald Kwan
Cc: Christina Zhang; Gavin He
Subject: FW: OPG White Paper - GAC deferral
Date: Monday, February 27, 2017 2:15:50 PM
Attachments: Global Adjustment Deferral_White Paper_OPG r1a.pdf
ATT00001.htm
Global Adjustment Deferral - White Paper - Terms to MOE Feb 21_2017.pdf
ATT00002.htm

I took a quick look through it, and they haven't, to my mind addressed the guaranteed vs. direct debt question that I raised, by maybe I missed it in my quick perusal.

Gadi

-----Original Message-----
From: Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
Sent: Monday, February 27, 2017 2:07 PM
To: Steve Orsini (MOF) <Steve.Orsini@ontario.ca>; Steven Davidson (MTCS) <Steven.Davidson@ontario.ca>; Helen Angus (MOHLTC) <Helen.Angus@ontario.ca>; Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: William Bromm (CAB) <William.Bromm2@ontario.ca>; Keley Katona (ENERGY) <Keley.Katona@ontario.ca>
Subject: Fwd: OPG White Paper - GAC deferral

Latest from OPG.

Sent from my iPad

Begin forwarded message:

From: "LEE John -TREASURY" <john.s.lee@opg.com<mailto:john.s.lee@opg.com>>
To: "Imbrogno, Serge (ENERGY)" <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Cc: "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, "Katona, Keley (ENERGY)" <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>, "HARTWICK Ken -FINANCE" <ken.hartwick@opg.com<mailto:ken.hartwick@opg.com>>, "KING Catriona -OFFCORPSEC" <catriona.king@opg.com<mailto:catriona.king@opg.com>>, "LYASH Jeffrey -PRESIDENT" <jeffrey.lyash@opg.com<mailto:jeffrey.lyash@opg.com>>
Subject: OPG White Paper - GAC deferral

Serge:

As requested, please find attached the OPG “White Paper” which reflects OPG view and understanding of the proposed Global Adjustment Smoothing Account and financing structure. I have also attached the “proposed terms and conditions” referenced in the white paper which was original sent to Energy on February 21st.

John

John Lee | Vice President Treasurer |
Ontario Power Generation | 700 University Avenue, H18 A6, Toronto, Ontario M5G 1X6 |
416.592.6392 | john.s.lee@opg.com<mailto:john.s.lee@opg.com>

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February 27, 2017

Mr. Serge Imbrogno
Deputy Minister,
Ministry of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Deputy:

Below is a summary of OPG's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account and financing structure. These views are contingent on the proposed terms and conditions that were sent to the Ministry of Energy on February 21, 2017.

Understanding that the finalization of the legal terms, the Trust indentures, financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, input from capital markets, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Please do not hesitate to contact me if you have any questions regarding this summary.

Sincerely,

Mr. Ken Hartwick
Chief Financial Officer and Senior Vice President, Finance
Ontario Power Generation
W: 416-592-6985
C: 647-544-6985
ken.hartwick@ opg.com

cc. Jeff Lyash, President and CEO, OPG

Background:

The Province has indicated that it will take steps to reduce electricity bills in the near term. It has identified reductions in the Global Adjustment Charge (GAC) charged to electricity customers as a means to achieve its policy goals. The Province is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily RPP-eligible customers). The exact quantum and duration of the program is still not known but based on discussions with the Province GAC charges of approximately $2-5B per year for the next 5-10 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.

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

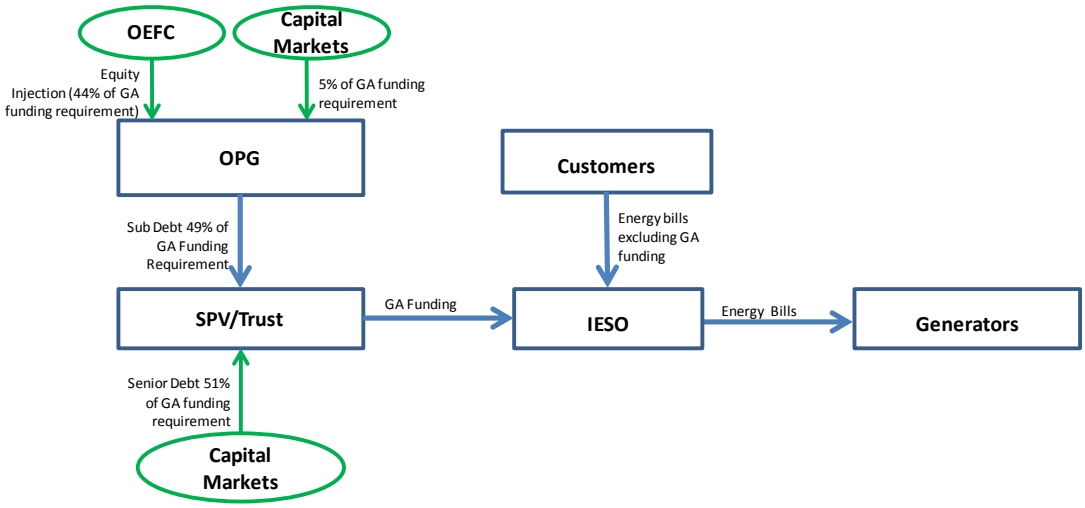
- restrict the risk to OPG;

- maximize the cost-effectiveness of the Trust or the Special Purpose Vehicle ("SPV") financing vehicle; and
- allow for consolidation into OPG financial statements.

The success of this structure is dependent on achieving a number of objectives which are reviewed in the following sections:

A. Ability to Recognize an Asset and Record Revenue
B. Ability to Consolidate the SPV into OPG
C. Ability to Finance
D. External Assessment
E. Risk Summary

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



Process:

The IESO will effectively sell the 'right to collect' deferred future revenue from ratepayers (GA Recovery Right asset) to the SPV in return for cash proceeds. 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 will obtain 44% of this financing as an equity injection from the Province and 5% from capital markets.

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

1) It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.

2) In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:
   - The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
   - The SPV must have the control and power to obtain future economic benefits from the intangible asset.
   - The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

3) In order for the SPV to recognize appropriate revenue to offset any ongoing costs, the Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis. This may result in additional amounts to be deferred to achieve the desired customer impact. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS

OPG 'Control' of the SPV - Accounting Requirements

1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. The SPV 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 SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV'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. No party shall have the ability to remove OPG from its role and authority in the SPV.
4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. OPG must have the power over the relevant activities of the SPV and be compensated. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. OPG must have the power to establish operating and capital budgets of the SPV.
5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.
6. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    - The SPV
    - Any of OPG's investments in the most subordinated debt of the Trust
7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%[1] of the total debt of the SPV. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. A quantitative analysis should be performed at a later date to corroborate the appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.
8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

[1] While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.

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
b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset
c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV 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.
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.
e. OPG should participate in the detailed design of the above and the SPV 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.

Nothwithstanding the above, under certain 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), the OEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required.

Legislation

9. The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.
10. 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 Trustees.
11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the legislation.
12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:
   - 51% senior secured debt from external markets
   - 39% senior subordinated debt from OPG (via Province equity injection into OPG)

- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
  - The Trust
  - Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province to undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.

C. Ability to Finance

Property Right or Right to Collect
Legislative Requirements for Financing
The GA Recovery Right must be structured to encompass the following elements:

- Right to recover from and bill Ontario electricity customers for (1) the principal amount of GA that is being deferred, (2) all interest and other financing costs incurred in respect of the deferral of the GA, (3) all fees, expenses and other administrative costs associated with such financing;
- Repayment/amortization schedule as agreed by the IESO and any purchaser of such GA Recovery Right (or pursuant to a pre-defined schedule/formula that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis);
- Repayment/amortization schedule must include a true up mechanism to ensure all costs associated with the deferral can be recovered from customers;
- IESO may dispose of the GA Recovery Right, provided that any such disposition shall be a true sale and absolute transfer to the purchaser of the IESO's right, title and interest in and to the GA Recovery Right;
- Purchaser will have the right to require the IESO (or any successor) to collect the principal amount of GA Recovery Right, together with interest, financing and administration costs, on the agreed repayment/amortization schedule;
- Right must be irrevocable and, if amended by future governments, debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment;
- GA Recovery Right will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity; and
- Make certain amendments to the Electricity Act to allow OPG to implement the SPV financing structure (e.g. allowing OPG to create subsidiaries and holding companies, and to have a beneficial interest in the SPV, etc). This would provide flexibility to accommodate possible variations to the financing structure that may be desirable over time.

Detailed legislative requirements are specified in the attachments as follows:

Attachment 1 Legislative requirements to allow deferral of global adjustment amounts to be financeable

Attachment 2 Statutory amendments

The proposed financing structure for the SPV is:

	Risk Profile	Source	% of Total Funding Requirements
Tranche A Senior Debt	The least risky	Capital Markets	51%
Tranche B Sub Debt	In between A&C	OPG via OEFC	39%
Tranche C Sub Debt)	The most risky	OPG via OEFC	5%
		OPG via Capital Markets	5%

SPV structure is used to accomplish the following:

- SPV holds right to charge customers for the benefit of debt holders;
- Allows the financing vehicle to be ring-fenced from OPG as an SPV structure is set up as generally single purpose entities with no other operations that could add risk to the SPV, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings;
- Enables SPV to potentially get a higher credit rating than OPG;
- Supports consolidation with OPG provided accounting requirements are satisfied;

This approach supports a number of objectives of the GA Recovery Right:

- 51% external senior debt supports separation of the SPV from the Province
- 5% junior subordinated debt establishes OPG's "at risk" equity which supports separation of the SPV from the Province
- Subordinated debt provides flexibility to the financing structure and additional credit support to external debt holders
- Subordinated debt sourced from OPG (mainly funded by equity injection from the Province) minimizes impact on OPG credit metrics reducing risk of an OPG rating downgrade that could result in the SPV being consolidated directly with the Province as the SPV would be considered an arm of the Province.

Recent transactions used as precedents are:

Duke Energy Florida Project Finance LLC
June 2016
5 series of bonds totalling USD$1.3B
Weighted average life from 2 to 19 years with interest rates from 1.2% to 3.1%
Credit rating AAA

Utility Debt Securitization Authority
Sponsored by Long Island Power Authority
March 2016
Amount issued USD$0.6B
Weighted average life of 12 years and weighted average yield of 2.7%

August 2016
Amount issued USD$0.5B
Weighted average life of 7 years and weighted average yield of 2.0%

Credit rating AAA

Cumulative outstanding (including previous issuances): USD$4.2B

D. External Assessment

Shakerhill Partners, an external advisor, identified the following items in an assessment of the structure and financeability of the structure:

- The structure is financeable however there are a number of significant risks to the structure:
  - Canadian and Ontario law does not provide the same protection to property right as exists in the US federal and state constitutions to limit the ability of governments to adversely impair contracts to the detriment of the holder;
  - Legislation could mitigate some of the risks – deferred recovery asset to be "uncapped", regular semi-annual true up to ensure recovery, Province provides sufficient committed liquidity to the IESO so that temporary shortfall in recovery does not affect payments to SPV, term of the deferral recovery substantially exceeds the longest maturity of debt of the SPV and that true-up mechanism take account of potential for currency, interest rate and duration mis-match between the debt of the SPV and the recovery mechanism;
  - Size of the program may be too large for Canadian securitization market requiring access to the US securitization market;
- Final maturity of debt should not exceed 30 years from inception of the program
- True up mechanism should be designed such that the forecast of recovery is less than 10% of the customer bill under downside scenarios to limit growth of the deferral balance as a higher portion of the customer bill increases the political risk to debt holders which could result in a lower credit rating and potential impact on financeability
- Securitized debt products are specialized and price at a premium to other fixed rate instruments however a successful program supported by a strong credit rating this premium could shrink over time to a minor spread over Provincial debt
- OPG's credit rating should be maintained provided sufficient equity is injected to maintain credit metrics
- While the structure is not expected to impact the Province there are risks that the program could negatively impact the rating agencies view of the Province's financial management.

E. Risk Summary

i. Consolidation

- Elements of the proposed structure were established to support consolidation of the SPV into OPG. These items 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.

ii. Financeability

- 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.

iii. Cost of Financing

- Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.
- The right to recover amounts from future customers must be irrevocable and subject to full recovery from the government in the event that future governments reduce or eliminate the recovery. A legal structure that is weaker than the precedent US transactions increases the risk to debt holders and the cost of financing.
- Interest rates on bonds in the securitization market are higher than equivalent rated bonds. Rate for a AAA securitization credit is about 50 bps higher than GOC (rated AAA) for a 5 year term. This difference is attributable to the specialized structure of the bond, smaller investor pool for this bond, smaller size of the market and higher perceived risks of the bond.
- Any regulator involvement must not be seen to modify any terms of debt issued or the property right securing the debt as this would increase risk to debt holders.

- It may not be possible to issue debt to match the terms of the deferred asset so shorter term debt would be used which raises risk to re-finance the maturing debt as the market may no longer be interested in this product. As well, underlying reference interest rates may be higher and the market may require a higher spread to invest in this product.
- With the GA Recovery Right program continuing for 10 years, debt issued over this period is subject to changes in both the underlying reference interest rates and appetite of the market for this product.

iv. OPG Credit Rating

- Minimizing the impact of significant additional debt on OPG's credit rating is dependent on higher EBITDA arising from earned income on the GA Recovery Right in excess of external debt. Ability of the SPV to record revenue reflecting the growth in asset value.
- Potential OPG credit rating downgrade if legislative structure is not adequate to support long term recoverability, inability to record revenue from growth in asset value or agencies view equity injection as debt.
- OPG credit rating downgrade could result in loss of GBE status or result in SPV being consolidated directly with the Province.

Attachment 1

LEGISLATIVE REQUIREMENTS TO ALLOW DEFERRAL OF GLOBAL ADJUSTMENT AMOUNTS TO BE FINANCEABLE

The IESO currently has a right to collect GA monthly from ratepayers through provisions in the *Electricity Act, 1998*. It is proposed that collection of a certain portion of the monthly GA be deferred for collection in the future, and that the right to recover the deferred GA from ratepayers be used as a basis for structured financing/securitization.

The current proposal is for a trust to be created as a financing vehicle (the "**Trust**") in connection the deferred GA. The Trust will finance the deferral of the GA by purchasing the right to recover such deferred GA from the IESO for the principal amount of the GA being deferred. For example, if the amount of GA that is being deferred is $200 million in a given month, the Trust will purchase from the IESO the right to future recovery of the deferred GA and the associated financing costs (including interest and transaction costs) for $200 million in cash.

The Trust is expected to finance these purchases from the IESO through a combination of senior secured financing raised in the capital markets and subordinated financing from OPG (the funding for which will mostly be from equity injections from the OEFC/Province).

For accounting purposes, OPG will need to have the ability to direct the activities of the Trust, through a services agreement and/or through the Trust's constating document.

Based on securitized financing raised by utilities in the US (backed by utility cost recovery orders) and the current regulatory framework in Ontario, the legislation in Ontario would need to be amended to provide the following, at a minimum:

1. The IESO will be empowered to create an asset (the "**Regulatory Asset**") consisting of all right, title and interest in and to:

   (a) right to recover from and bill Ontario electricity ratepayers for:

   (i) the principal amount of GA that is being deferred for collection;
   (ii) all interest and other financing costs incurred in respect of the deferral of the GA (whether through senior debt raised in the public markets or subordinated debt raised from OPG or others); and
   (iii) (subject to the comments in paragraph 5 below in respect of OPG's internal administrative costs only) all fees, expenses and other administrative costs associated with such financing, including up-front and ongoing financing costs and any indemnity payments;

all on such repayment/amortization schedule as agreed by the IESO and any purchaser of such right (or pursuant to a pre-defined schedule/formula in the legislation that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis); and

(b) all revenues, collections, claims, rights to payments, money or proceeds arising from the rights and interests set out in paragraph (a) above, regardless of whether such revenues, collections, claims, rights to payments, money or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, rights to payments, payments, money or proceeds.

2. The IESO may dispose of the Regulatory Assets created from time to time on such terms as the IESO determines in accordance with the terms of directives to be issued to the IESO from time to time by the Minister, provided that any such disposition shall be a true sale and absolute transfer of the IESO's right, title and interest in and to a Regulatory Asset to the purchaser of the Regulatory Asset.

3. The Regulatory Assets will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity thereof.

4. The legislation will need to recognize the Regulatory Assets as amounts that may be recovered by the IESO (e.g. it could be designated as a "GA Deferral" and would be included in the amounts collectible by the IESO through the GA collection mechanism, and would include interest and financing costs).

5. The purchaser of the Regulatory Asset will have the right to require the IESO (or any successor) to collect the principal amount of GA deferred, together with interest, financing and administration costs, on the agreed repayment/amortization schedule. **[NTD: In the LIPA securitization rate order, if the entity that is authorized to collect rates to service the bonds ends up defaulting, there is the ability to request a court to order "sequestration" and payments of amounts owing to the owner of the Regulatory Asset. Consider whether to include a similar right here. Alternatively, consider whether a security interest over the moneys collected by the IESO could be provided to the purchaser.]**

OEB would be provided with oversight over the internal administrative costs collected by the Financing Trust. This could be accomplished by (a) providing the purchaser of the Regulatory Asset with the right to require

the IESO or a successor to collect only the principal amount of GA together with interest and financing costs and third party fees and expenses, and (b) requiring the IESO to collect amounts through the global adjustment and make payments to the purchaser of the Regulatory Asset with respect to the internal administrative costs incurred by the purchaser in connection with the purchase and management of the Regulatory Asset and the Financing Trust, in accordance with the order of the OEB then in effect. Under this mechanism, the OEB would be required to review the purchaser's internal administrative costs through a streamlined process and issue such orders in accordance with rules to be prescribed under a new regulation under the OEB Act, which would clearly limit the OEB's scope of review and could establish the basis for the purchaser to receive an appropriate fee for its services.

6. In the event that any action is taken or permitted by the Province or any regulatory authority that limits, alters, or impairs the value of a Regulatory Asset or reduces the ability of the IESO or the purchaser of the Regulatory Asset to collect or recover the costs associated therewith, the owner of the Regulatory Asset and the holders of any bonds or other securities issued to finance the purchase of the Regulatory Asset, will have a right of action against the Province for any damages suffered as a result of such amendment.

Attachment 2

STATUTORY AMENDMENTS

The following is preliminary and is based on our current understanding of the proposed structure and objectives. For example, we have assumed that the structure will not entail the insertion of a new Holdco between OPG and the Province. As these aspects are refined, some of the suggested amendments described below may not be needed and other aspects that we are not aware of may need to be considered. Accordingly, these suggested amendments are provided for discussion purposes and are subject to change. We would welcome the opportunity to work with OPG and the Ministry on refining the scope and substance of required legislative and regulatory amendments.

A. Amendments to Implement Structure

Certain *Electricity Act, 1998* amendments would be needed to implement the anticipated structure (which we understand, as noted above, would not include a Holdco), as follows:

- **Section 53.1(1):** Amend to permit owning and operating generation facilities through subsidiaries (not only directly through OPG). In addition, amend to permit OPG to administer, manage, loan moneys to and have a beneficial interest in, if applicable, Financing Trust.

- **Section 53.2:** Amend to permit the Minister to acquire, hold, dispose of or otherwise deal with securities or debt obligations of, or any other interest in, OPG or any subsidiaries. This is to accommodate possible variations to the financing structure that may be desirable over time.

- **Section 53.■ (new):** New statutory section to permit the Minister to enter into arrangements relating to an exercise of powers under 53.2.

- **Section 53.■ (new)**: New statutory section providing that creditors of Financing Trust have no recourse to the assets of OPG or any of its subsidiaries (other than Financing Trust, if applicable). In addition, consideration should be given as to whether the Act should be amended so that the Financing Trust cannot be wound up or liquidated.

B. Miscellaneous Corporate Items to Address

- **OPG Articles:** Amend the OPG's articles to remove the private company restrictions.

- **MOA with Province:** Consider whether any amendments to OPG's MOA with the Province are required to contemplate the Financing Trust.

C. Amendments Under Electricity Act to Implement GA Smoothing

Based on our understanding that the global adjustment smoothing mechanism is intended to benefit residential and small business customers only and that the Minister will be responsible for determining how much global adjustment smoothing is to be applied in a given month, if any, amendments to the *Electricity Act*, *1998* and Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) would be needed to implement the mechanism, as follows:

(i) Electricity Act:

- **Section ■ (New):** Establish a new power for the Minister to make directives to the IESO in relation to the global adjustment smoothing mechanism and, particularly, for purposes of establishing global adjustment smoothing amounts from time to time (expected to be monthly). To the extent possible, the directive power should be drafted so as to limit the ability for a future Minister to require the IESO to do anything that would materially and adversely affect the Financing Trust or its lenders. **[NTD: While our understanding is that the Minister would direct this, we note from other materials we have seen that OPG may instead be recommending a formula approach. It is not clear what the formula would look like, where it would be set out or how it would be applied and by whom]**

- **Paragraph 25.33(1):** This section says that IESO shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of market participants reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require IESO to ensure that, over time, payments by prescribed classes of market participants also reflect amounts paid to Financing Trust. **[NTD: Not certain this is needed if only to benefit residential and small business consumers, who are not market participants. May be needed in reference to payments from distributors and retailers]**

- **Paragraph 25.33(2):** This section says that distributors and retailers shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of consumers reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require distributors and retailers to ensure that, over time, payments by prescribed classes of consumers also reflect amounts paid to Financing Trust.

- **Note**: As described below, the regulation will need to include new requirements for the IESO to record the global adjustment smoothing amounts in one or more variance accounts and to use those amounts to offset amounts otherwise recorded in the variance accounts under Section 25.33(3) of the Act. For context, we note:

    - Section 25.33(3) says that adjustments under (1) or (2) relating to electricity consumed by consumers whose rates are determined by

the OEB under s. 79.16 of the OEB Act (i.e. RPP Customers) shall instead be made in accordance with the regulations to one or more variance accounts established and maintained by the IESO.

- Section 25.33(4) says IESO, distributors and retailers shall make and receive such payments, set-offs and credits as may be required or permitted by the regulations with respect to consumers described in (3), i.e. RPP Customers.

- Section 25.33(5) says that IESO shall establish and maintain such variance accounts as may be needed to record all amounts payable or receivable by it under 25.33.

(ii) O. Reg. 429/04 (Adjustments Under Section 25.33 of the Act):

- **Section 1(1):** Consider adding definitions for "Financing Trust" and "global adjustment smoothing amount" or such other terms as may be preferred.

- **Section 1.2(1) (New):** Add section providing that, for the purposes of this Regulation, the global adjustment smoothing amount for a month is the amount determined by the IESO in accordance with a directive from the Minister under section ■ of the Electricity Act in respect of the month. **[NTD: See above note re use of Minister directives]**

- **Section 1.2(2) (New):** Consider adding a section providing that the IESO shall publish the global adjustment smoothing amount for a month by no later than the 10th business day of the following month [to align with general publication requirements for global adjustment under s. 1.1(2)].

- **Section 10(1):** Amend formula for calculating Class B GA rate by subtracting the global adjustment smoothing amount for a month from "M", which is the total amount of the global adjustment for the month. The global adjustment smoothing amount could be designated as "X", such that the formula would be (M-X-N)/(P-Q). Define "X" as the global adjustment smoothing amount for the month as determined by the IESO in accordance with the Minister's directive under section ■ of the Electricity Act for the month. **[NTD: See above note re use of Minister directives]**

- **Section 10.1 (New):** Add new section to deal with adjustments under subsection 25.33(3) of the Act, i.e. in respect of RPP consumers. This section should require the IESO to establish, within the variance account(s) it maintains pursuant to subsection 25.33(3) of the Act, one or more subaccounts in which it shall record the global adjustment smoothing amounts applicable to the classes of consumers described in subsection 25.33(3) of the Act. This section must also specify that the IESO shall apply the amounts recorded in the subaccounts against the balances in the variance accounts for purposes of section 79.16(3) of the OEB Act.

  - **Note:** This is a key aspect because, when the OEB determines RPP rates, it must take into account the balances in the variance accounts established by the IESO under s. 25.33 of the Electricity Act and make adjustments with a view to eliminating the balances within 12 months. This proposed new section 10.1 causes the IESO to reduce (in the near term) the variance account balances by the global adjustment smoothing amounts, as provided by Financing Trust, thereby enabling the OEB to determine RPP rates that, despite being lower for RPP consumers in the near term, still eliminate the relevant variance account balances within 12 months.

- **Paragraph 11(2)2.ii:** Amend the formula for calculating the allocation of global adjustment for a month to a licensed distributor that is a market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x (R+S-T)]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 11(2)3:** Amend the formula for calculating the allocation of global adjustment for a month to each Class B market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x U]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 16(7)4:** Consider amending the description of "Global Adjustment" that is required to be included on certain invoices so as to inform consumers that their portion of the global adjustment for the month (i) may have been reduced by the application of a global adjustment smoothing amount from the Financing Trust, or (ii) may include amounts payable to the Financing Trust in respect of global adjustment smoothing amounts previously applied.

- **Section 20(1):** This section establishes an obligation for the Ontario Electricity Financial Corporation and every licensed distributor that is a market participant to give the IESO such information as the IESO may require for the purposes of the Regulation in the form specified by the IESO and before the expiry of the period specified by the IESO. Consider amending to extend this obligation to the Financing Trust.

- **Section 20(6):** This section provides that on request by the OEB, the IESO, a licensed distributor, an embedded generator, a retailer or the OEFC shall give the OEB such information relating to this Regulation as the OEB may require, in the form and within the period specified by the OEB. Consider amending to extend this obligation to the Financing Trust.

D. Amendments Under OEB Act to Implement Cost Recovery for Financing Trust

Amendments to the *Ontario Energy Board Act*, including amendments to O. Reg. 95/05 (Classes of Consumers and Determination of Rates) and the introduction of a new regulation, would be needed to implement a cost recovery process for the Financing Trust in relation to the global adjustment smoothing mechanism, potentially with limited OEB oversight, as follows:

(i) Ontario Energy Board Act:

- **Section 78(3.3):** This provision establishes an obligation for the OEB, when determining rates for the retailing of electricity, to take into account balances in variance accounts established under section 25.33 of the Electricity Act and to make adjustments "with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct." Consider whether any amendments are needed, and confirm this works with the framework being proposed.

- **Section 78.7 (New):** We understand that the Province may want the OEB to have an oversight role. One possible approach would be to establish a new statutory section establishing that the IESO shall make payments to the Financing Trust with respect to the internal administrative costs incurred by the Financing Trust in connection with the purchase and management of the Regulatory Asset and the Financing Trust. Such payments by the IESO would need to be made in accordance with the order of the OEB then in effect, which orders shall be made by the OEB in accordance with rules prescribed under a new regulation.

    - The new regulation would need to be clear that the OEB does not have jurisdiction to consider the principal amount or any interest, financing costs, third party fees or expenses. Rather, OEB's role would be limited to considering the internal administrative costs of the Financing Trust and ensuring the Financing Trust receives an appropriate fee for its services, all of which would be recovered by the Financing Trust from the IESO, which would collect those amounts in the global adjustment. Note that, if this approach is accepted, the IESO and distributors and retailers would need the authority to collect such amounts as part of the GA and IESO would need the authority to pay such amounts to the Financing Trust. As such, additional amendments would be needed under O. Reg. 429/04.

- **Note:** Section 79.16 of the OEB Act does not require changes, but the significance of this provision should be understood.

    - Section 79.16 gives the OEB responsibility for determining electricity commodity prices for eligible consumers. Eligibility is determined under Reg. 95/05 (Classes of Consumers and Determination of Rates), which is also known as the Regulated Price Plan (RPP) Regulation.
    - Section 4(2) of the RPP Regulation defines RPP-eligible consumers as low volume consumers (i.e. those who annually use less than 150,000 kWh

or such other amount as prescribed), consumers with demand of 50 kW or less, residential consumers that have accounts with distributors, consumers who annually use 150,000 to 250,000 kW of electricity, and consumers who have accounts with distributors if in the farming business.

- Paragraph 6(1)3 of the RPP Regulation provides that "In determining the rates (for RPP-eligible consumers), the Board shall forecast the cost of electricity to be consumed by the consumers to whom the rates apply, taking into consideration adjustments required under section 25.33 of the *Electricity Act, 1998* and shall ensure that the rates reflect those costs."
- The Ontario Energy Board has developed a Regulated Price Plan Manual (revised February 16, 2016) to describe the processes and methodologies it uses for determining electricity commodity prices that are charged to RPP consumers pursuant to Section 79.16 of the OEB Act and paragraph 6(1)3 of the RPP Regulation.

(ii) O. Reg. 95/05 (Classes of Consumers and Determination of Rates)

- **Paragraph 6(1)3:** Amend so as to require the Board, when forecasting the cost of electricity to be consumed by the consumers to whom the rates apply, to take into consideration not only the adjustments required under section 25.33 of the Electricity Act but also the application or prior application of global adjustment smoothing amounts determined by the IESO in accordance with Minister directives under section ■ of the Electricity Act, and to ensure that the RPP rates reflect those amounts. **[NTD: See above note re use of Minister directives]**

(iii) New Regulation (Payments to the Financing Trust)

- If the OEB is to be given the role of reviewing and approving the recovery of OPG's internal administrative costs for the Financing Trust under the potential section 78.7 (see above), then this regulation should describe the process and criteria pursuant through which the OEB would determine the amounts that the IESO would be required to collect through the global adjustment, in accordance with section 25.33 of the Electricity Act, and pay to the Financing Trust in respect of the provision of global adjustment smoothing amounts. This part of the regulation should establish:

    - any reporting requirements from the Financing Trust and/or the IESO to the OEB in connection with the global adjustment smoothing mechanism;
    - the frequency of the OEB making determinations under this part of the regulation;
    - the process through which the OEB shall make these determinations, which should be a streamlined administrative process rather than a public hearing process or, if a hearing is needed, then the scope of the proceeding should be clearly and narrowly constrained so as to deter intervenor involvement, lengthy proceedings and reduce/eliminate risk to recovery by Financing Trust;

- the basis for the OEB's determinations as to the payments that shall be made to the Financing Trust, which should specify that:
  - the Financing Trust shall recover its prudently incurred internal administrative costs on a forecast basis each year;
  - the Financing Trust shall receive an appropriate fee each year (with some guidance as to what would be appropriate); and
  - the approved payment amounts shall be collected by the IESO through the global adjustment and paid to the Financing Trust in accordance with the order of the OEB then in effect. Note that O. Reg. 429/04 would likely need amendments to permit IESO (and distributors and retailers) to collect these amounts through the global adjustment.

GA Smoothing – OPG Accounting Considerations

- An SPV/Trust is a stand-alone entity able to conduct business separately under a Trust agreement

The conditions required for OPG to consolidate the SPV/Trust are outlined in the following table

Issue	Response
1. Decision Making	• OPG must have decision making authority on the operation of the SPV/Trust (without a veto right by the Province), including naming of trustees, establishing operating plans and budgets, setting or changing financing policies. • The SPV/Trust while operating within the legislation, must be controlled by OPG to operate freely and to alter terms and conditions not specified in the legislation to ensure recovery of the deferred amounts
2. Business Risk	• The SPV/Trust must have variability of returns as a normal business enterprise would, including such things as interest charged on deferred amounts, decisions on how to finance these deferred amounts, the ability to make / lose and keep any spread from financing
3. Funding	• The Province cannot directly or indirectly fund more than 50% of SPV/Trust or any investment in the SPV/Trust • OPG must own at least 50% of the most exposed equity /sub-debt in the SPV/Trust
4. Directive	• Directive that is issued should not be prescriptive or direct OPG to set up this business. The directive should only be “guiding” i.e. to allow OPG to evaluate options and put forward to the OPG Board a recommended plan for Shareholder approval

GA Smoothing – OPG Accounting Considerations - continued

Issue	Response
5. Other required Attributes:	The legislation that supports the formation of the SPV/Trust must have the following attributes: • Must require interest, carrying and administrative costs be paid to the Trust to allow for Revenue recognition • The amount to be deferred must either be specified or be calculated based on a specific formula that is not subject to ongoing decision making by the Province. **The Province cannot have the ability to override this formula** • Legislation should be written to avoid the possibility of being revoked with wording to ensure the SPV/Trust and its debt holders would have their capital guaranteed and paid for directly by the Province if such a situation were to happen • The spirit of the legislation should be reflected in the Trust Indenture Agreement

GA Financing Structure Requirements

KEY ELEMENTS REQUIRED TO ENSURE THE DEFERRAL OF GA CHARGES CAN BE FINANCED:

Creation of Strong Property Rights

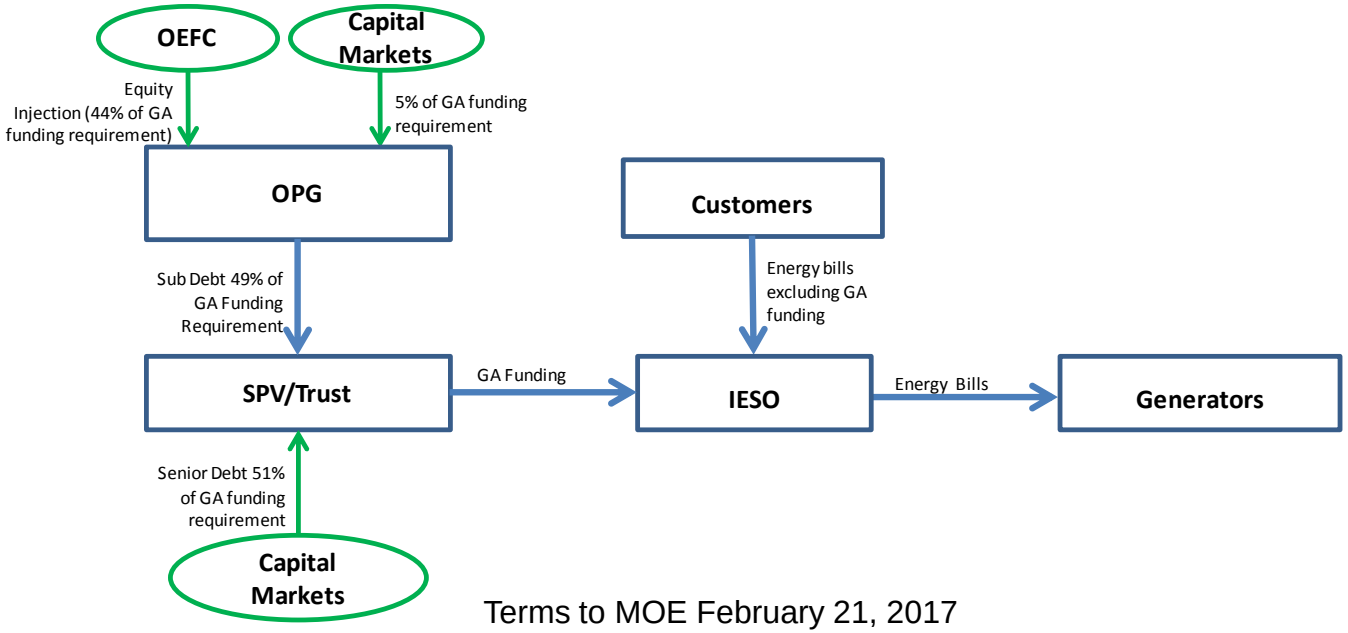
- Legislation enshrines the ability of the IESO to create a Right to charge customers in the future for the Global Adjustment (GA) deferred today including principal amount deferred, interest and other financing costs on the amount deferred and fees, expenses and other administrative costs.
- The Right can be sold to an appropriate Trust or Special Purpose Vehicle (SPV) to obtain funds to pay amounts due to generators under contracts or regulation. These SPVs are generally single purpose entities with no other operations that could add risk to the entity, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings.
- Right must be irrevocable and if the Right is amended by future governments the debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment.
- Right must specify the recovery period or the mechanism for setting the recovery rate including true up of the rate to ensure all amounts are recovered

Economic Factors

- Limits on the recovery amount (principal, interest, fees and expenses) charged to customers in future periods must have compensating elements such as longer recovery period to ensure the full amount deferred plus interest, financing and other administration costs is recovered from customers.
- Need to balance customer relief with debt holder risk. Longer recovery periods and larger deferred balances increase risk to the debt holder of future government intervention.
- The amount required by the SPV to purchase and service the Right will be funded 51% from debt holders, 5% from OPG through capital markets and 44% from OPG via equity injection to OPG from the Province. The funding from OPG will be loaned to the SPV as subordinated debt.

GA Financing Structure Requirements - continued

- SPV will be used to raise the GA financing and ring fence OPG from its legal obligations
- SPV will be structured to allow for GBE accounting consolidation into OPG
- Given that SPV will be consolidated into OPG for accounting purposes, the significant amount of debt required to fund the GA deferral will have a severe impact on OPG's credit rating. If 100% of the requirement is funded by debt OPG would be downgraded.
- To manage this exposure and minimize the cost of funding. The required funding would be split into 2 buckets:
    1. 56% from capital markets, and
    2. The remainder provided by the Province via equity injection, which would be loaned to SPV as subordinated debt.
- The use of equity to fund a portion of the GA deferral also allows for an improvement in both Net Income and EBITDA as incremental revenue is captured by the increase in the value of the deferral which would offset the fiscal impact of the borrowing at Province level.
- Credit rating metrics are generally maintained within established limits.



From: Gadi Mayman
To: Mike Manning; Ken Kandeepan; Ronald Kwan
Cc: Christina Zhang; Gavin He
Subject: FW: OPG White Paper - GAC deferral
Date: Monday, February 27, 2017 2:15:50 PM
Attachments: Global Adjustment Deferral_White Paper_OPG r1a.pdf
ATT00001.htm
Global Adjustment Deferral - White Paper - Terms to MOE Feb 21_2017.pdf
ATT00002.htm

I took a quick look through it, and they haven't, to my mind addressed the guaranteed vs. direct debt question that I raised, by maybe I missed it in my quick perusal.

Gadi

-----Original Message-----
From: Imbrogno, Serge (ENERGY) [mailto:Serge.Imbrogno@ontario.ca]
Sent: Monday, February 27, 2017 2:07 PM
To: Steve Orsini (MOF) <Steve.Orsini@ontario.ca>; Steven Davidson (MTCS) <Steven.Davidson@ontario.ca>; Helen Angus (MOHLTC) <Helen.Angus@ontario.ca>; Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: William Bromm (CAB) <William.Bromm2@ontario.ca>; Keley Katona (ENERGY) <Keley.Katona@ontario.ca>
Subject: Fwd: OPG White Paper - GAC deferral

Latest from OPG.

Sent from my iPad

Begin forwarded message:

From: "LEE John -TREASURY" <john.s.lee@opg.com<mailto:john.s.lee@opg.com>>
To: "Imbrogno, Serge (ENERGY)" <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Cc: "Nelms, Scott (ENERGY)" <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, "Katona, Keley (ENERGY)" <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>, "HARTWICK Ken -FINANCE" <ken.hartwick@opg.com<mailto:ken.hartwick@opg.com>>, "KING Catriona -OFFCORPSEC" <catriona.king@opg.com<mailto:catriona.king@opg.com>>, "LYASH Jeffrey -PRESIDENT" <jeffrey.lyash@opg.com<mailto:jeffrey.lyash@opg.com>>
Subject: OPG White Paper - GAC deferral

Serge:

As requested, please find attached the OPG “White Paper” which reflects OPG view and understanding of the proposed Global Adjustment Smoothing Account and financing structure. I have also attached the “proposed terms and conditions” referenced in the white paper which was original sent to Energy on February 21st.

John

John Lee | Vice President Treasurer |
Ontario Power Generation | 700 University Avenue, H18 A6, Toronto, Ontario M5G 1X6 |
416.592.6392 | john.s.lee@opg.com<mailto:john.s.lee@opg.com>

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February 27, 2017

Mr. Serge Imbrogno
Deputy Minister,
Ministry of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Deputy:

Below is a summary of OPG's preliminary views on the implementation of the Province's proposed Global Adjustment Smoothing Account and financing structure. These views are contingent on the proposed terms and conditions that were sent to the Ministry of Energy on February 21, 2017.

Understanding that the finalization of the legal terms, the Trust indentures, financing structure and other detailed terms will take several months and will involve collaboration between legal counsel, input from capital markets, parties involved and other stakeholders, this letter is intended to provide the guideline and framework which could form the foundation of the plan.

Please do not hesitate to contact me if you have any questions regarding this summary.

Sincerely,

Mr. Ken Hartwick
Chief Financial Officer and Senior Vice President, Finance
Ontario Power Generation
W: 416-592-6985
C: 647-544-6985
ken.hartwick@ opg.com

cc. Jeff Lyash, President and CEO, OPG

Background:

The Province has indicated that it will take steps to reduce electricity bills in the near term. It has identified reductions in the Global Adjustment Charge (GAC) charged to electricity customers as a means to achieve its policy goals. The Province is proposing to temporarily reduce the amount of the GAC charged to electricity customers (primarily RPP-eligible customers). The exact quantum and duration of the program is still not known but based on discussions with the Province GAC charges of approximately $2-5B per year for the next 5-10 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.

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

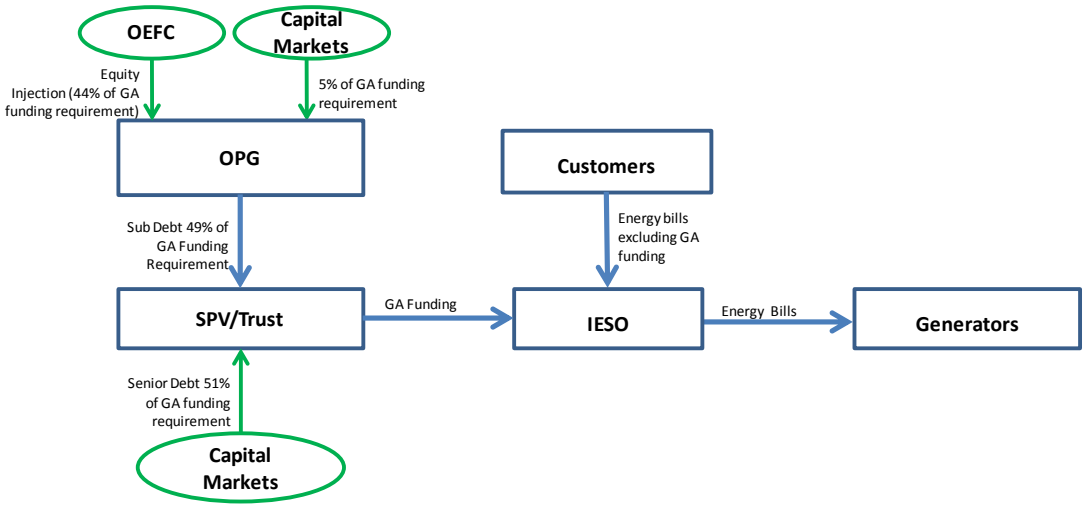
- restrict the risk to OPG;

- maximize the cost-effectiveness of the Trust or the Special Purpose Vehicle ("SPV") financing vehicle; and
- allow for consolidation into OPG financial statements.

The success of this structure is dependent on achieving a number of objectives which are reviewed in the following sections:

A. Ability to Recognize an Asset and Record Revenue
B. Ability to Consolidate the SPV into OPG
C. Ability to Finance
D. External Assessment
E. Risk Summary

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



Process:

The IESO will effectively sell the 'right to collect' deferred future revenue from ratepayers (GA Recovery Right asset) to the SPV in return for cash proceeds. 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 will obtain 44% of this financing as an equity injection from the Province and 5% from capital markets.

A. Ability to Recognize an Asset and Record Revenue

Accounting Requirements under International Financial Reporting Standards (IFRS)

1) It is our understanding that the IESO and KPMG have concluded that the sale of this 'right to collect' future revenue (or regulatory asset) is not a financing transaction and will not be recorded as a financial liability. Based on that conclusion, the right to collect will be accounted for as an intangible asset in the SPV.

2) In order to the SPV to record this right as an intangible asset, the right must meet the following conditions:
   - The intangible asset must be separable and arise from a contractual or legal right (i.e. mandated by the Legislation and SPV Indenture Agreement).
   - The SPV must have the control and power to obtain future economic benefits from the intangible asset.
   - The SPV must be able to demonstrate that the intangible asset is purchased at fair value.

3) In order for the SPV to recognize appropriate revenue to offset any ongoing costs, the Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis. This may result in additional amounts to be deferred to achieve the desired customer impact. Payment of revenue to the SPV is also important to service the interest expenses of the debt.

B. Ability to Consolidate the SPV into OPG under IFRS

OPG 'Control' of the SPV - Accounting Requirements

1) In order to meet the accounting definition of 'control', accounting guidance must be considered. There are no bright lines to determine whether OPG has exposure, or rights, to variable returns from its involvement with the SPV, or whether it has the ability to affect the returns of the SPV through its power over the SPV. Rather, all facts and circumstances are considered when assessing whether an entity has control over another entity. Based on the relevant accounting guidance under IFRS, OPG has proposed terms necessary to demonstrate that OPG has control over the SPV. OPG's external auditors, Ernst & Young, has provided their concurrence that based on the information provided to them to date that the following conditions should permit consolidation of the SPV by OPG.

Directive:

1. The SPV 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 SPV vehicle to administer, finance and operate the Global Adjustment plan. The control, risk and rewards of that SPV will determine its consolidation into OPG as a business enterprise.

SPV:

2. The SPV should not operate in a predetermined way such that OPG does not have decision-making authority over the SPV'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. No party shall have the ability to remove OPG from its role and authority in the SPV.
4. The Province cannot have the right to veto OPG's decisions about the relevant activities of the SPV. OPG must have the power over the relevant activities of the SPV and be compensated. The relevant activities of the SPV include (but are not limited to) the evaluation and decisions on financing alternatives, duration, and the strategy to minimize financing costs. OPG must have the power to establish operating and capital budgets of the SPV.
5. OPG must have the power to determine or change operating and financing policies of the SPV, which will affect the variability of risks and returns.
6. The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
    - The SPV
    - Any of OPG's investments in the most subordinated debt of the Trust
7. OPG must own greater than 50% of the most subordinated debt and targeted to be no less than 5%[1] of the total debt of the SPV. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources. A quantitative analysis should be performed at a later date to corroborate the appropriateness of the 5% threshold to support that the 5% subordinated debt investment is sufficient to absorb most of the expected variability in the SPV.
8. OPG must have the ability to earn variable returns by exercising its authority, which shall be accomplished as follows:

[1] While the rest of the letter refers to a 10% investment in the most junior subordinated debt with OPG owning 5%, it should be noted that OPG should own more than 50% of the most subordinate debt. For simplicity, the degree to which OPG's ownership beyond 50% is not shown in this letter.

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
b. OPG shall have the authority to determine the financing strategy, which will vary the financing costs with the objective of enabling the SPV to achieve a more favourable return compared to the return from the restructured asset
c. The SPV shall establish classes of liabilities (senior, subordinated and the most subordinated). The classes would allow the SPV 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.
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.
e. OPG should participate in the detailed design of the above and the SPV 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.

Nothwithstanding the above, under certain 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), the OEFC may provide bridge financing beyond the designated percentage for a defined period. The relevant terms should ensure that this temporary measure does not detract from the rights of OPG to direct all of the relevant activities of the SPV. Additionally, OPG should not be protected from risk of loss by the OEFC with respect to its subordinated investment, nor should it lose its right to derive the residual returns should such bridge financing be required.

Legislation

9. The Legislation must require interest, carrying and administrative costs to be paid to the SPV on a monthly basis, so that the SPV is able to recognize appropriate revenue to offset any ongoing costs.
10. 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 Trustees.
11. The Legislation must be written to avoid legal or constitutional challenges and be irrevocable to reduce the cost of borrowing and with a specific formula which determines the deferral amount. As irrevocability would be difficult under Canadian law one mitigation would be to provide a Provincial guarantee which only applies with cancellation or amendment of the legislation.
12. The spirit of the above terms should be reflected in the SPV Indenture Agreement as well as Legislation, wherever possible.

2) The Trust is expected to be financed as follows:
   - 51% senior secured debt from external markets
   - 39% senior subordinated debt from OPG (via Province equity injection into OPG)

- 10% junior subordinated debt from OPG (5% from external markets and 5% from Province equity injection into OPG).

When assessing control, an investor shall consider the nature of its relationship with other parties and whether those parties are acting on the investor's behalf (i.e. they are 'de facto agents'). If OPG is assessed to be a 'de facto agent' of the Province, it will compromise the ability for OPG to consolidate the Trust. The split above is to meet the following conditions to ensure that OPG is not considered a 'de facto agent' of the Province:

- The Province or its agencies must not directly or indirectly fund (through debt or equity) more than 50% of the following:
  - The Trust
  - Any of OPG's investments in the most subordinated debt of the Trust
- OPG must own greater than 50% of the most subordinated debt and targeted to own no less than 5% of the total debt of the Trust. Such ownership must be financed entirely by OPG through operating cash flows or external debt, without assistance from Provincial sources.

3) The Province will need to conclude on whether OPG still meets the definition of a Government Business Enterprise as defined under Public Sector Accounting Board standards in order to obtain the preferred consolidation treatment after the transaction. We also recommend that the Province to undertake the analysis deemed necessary to confirm the accounting treatment in its consolidated Public Accounts, including if the recognition of the intangible asset would result in an offsetting liability in the Public Accounts.

C. Ability to Finance

Property Right or Right to Collect
Legislative Requirements for Financing
The GA Recovery Right must be structured to encompass the following elements:

- Right to recover from and bill Ontario electricity customers for (1) the principal amount of GA that is being deferred, (2) all interest and other financing costs incurred in respect of the deferral of the GA, (3) all fees, expenses and other administrative costs associated with such financing;
- Repayment/amortization schedule as agreed by the IESO and any purchaser of such GA Recovery Right (or pursuant to a pre-defined schedule/formula that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis);
- Repayment/amortization schedule must include a true up mechanism to ensure all costs associated with the deferral can be recovered from customers;
- IESO may dispose of the GA Recovery Right, provided that any such disposition shall be a true sale and absolute transfer to the purchaser of the IESO's right, title and interest in and to the GA Recovery Right;
- Purchaser will have the right to require the IESO (or any successor) to collect the principal amount of GA Recovery Right, together with interest, financing and administration costs, on the agreed repayment/amortization schedule;
- Right must be irrevocable and, if amended by future governments, debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment;
- GA Recovery Right will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity; and
- Make certain amendments to the Electricity Act to allow OPG to implement the SPV financing structure (e.g. allowing OPG to create subsidiaries and holding companies, and to have a beneficial interest in the SPV, etc). This would provide flexibility to accommodate possible variations to the financing structure that may be desirable over time.

Detailed legislative requirements are specified in the attachments as follows:

Attachment 1 Legislative requirements to allow deferral of global adjustment amounts to be financeable

Attachment 2 Statutory amendments

The proposed financing structure for the SPV is:

	Risk Profile	Source	% of Total Funding Requirements
Tranche A Senior Debt	The least risky	Capital Markets	51%
Tranche B Sub Debt	In between A&C	OPG via OEFC	39%
Tranche C Sub Debt)	The most risky	OPG via OEFC	5%
		OPG via Capital Markets	5%

SPV structure is used to accomplish the following:

- SPV holds right to charge customers for the benefit of debt holders;
- Allows the financing vehicle to be ring-fenced from OPG as an SPV structure is set up as generally single purpose entities with no other operations that could add risk to the SPV, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings;
- Enables SPV to potentially get a higher credit rating than OPG;
- Supports consolidation with OPG provided accounting requirements are satisfied;

This approach supports a number of objectives of the GA Recovery Right:

- 51% external senior debt supports separation of the SPV from the Province
- 5% junior subordinated debt establishes OPG's "at risk" equity which supports separation of the SPV from the Province
- Subordinated debt provides flexibility to the financing structure and additional credit support to external debt holders
- Subordinated debt sourced from OPG (mainly funded by equity injection from the Province) minimizes impact on OPG credit metrics reducing risk of an OPG rating downgrade that could result in the SPV being consolidated directly with the Province as the SPV would be considered an arm of the Province.

Recent transactions used as precedents are:

Duke Energy Florida Project Finance LLC
June 2016
5 series of bonds totalling USD$1.3B
Weighted average life from 2 to 19 years with interest rates from 1.2% to 3.1%
Credit rating AAA

Utility Debt Securitization Authority
Sponsored by Long Island Power Authority
March 2016
Amount issued USD$0.6B
Weighted average life of 12 years and weighted average yield of 2.7%

August 2016
Amount issued USD$0.5B
Weighted average life of 7 years and weighted average yield of 2.0%

Credit rating AAA

Cumulative outstanding (including previous issuances): USD$4.2B

D. External Assessment

Shakerhill Partners, an external advisor, identified the following items in an assessment of the structure and financeability of the structure:

- The structure is financeable however there are a number of significant risks to the structure:
  - Canadian and Ontario law does not provide the same protection to property right as exists in the US federal and state constitutions to limit the ability of governments to adversely impair contracts to the detriment of the holder;
  - Legislation could mitigate some of the risks – deferred recovery asset to be "uncapped", regular semi-annual true up to ensure recovery, Province provides sufficient committed liquidity to the IESO so that temporary shortfall in recovery does not affect payments to SPV, term of the deferral recovery substantially exceeds the longest maturity of debt of the SPV and that true-up mechanism take account of potential for currency, interest rate and duration mis-match between the debt of the SPV and the recovery mechanism;
  - Size of the program may be too large for Canadian securitization market requiring access to the US securitization market;
- Final maturity of debt should not exceed 30 years from inception of the program
- True up mechanism should be designed such that the forecast of recovery is less than 10% of the customer bill under downside scenarios to limit growth of the deferral balance as a higher portion of the customer bill increases the political risk to debt holders which could result in a lower credit rating and potential impact on financeability
- Securitized debt products are specialized and price at a premium to other fixed rate instruments however a successful program supported by a strong credit rating this premium could shrink over time to a minor spread over Provincial debt
- OPG's credit rating should be maintained provided sufficient equity is injected to maintain credit metrics
- While the structure is not expected to impact the Province there are risks that the program could negatively impact the rating agencies view of the Province's financial management.

E. Risk Summary

i. Consolidation

- Elements of the proposed structure were established to support consolidation of the SPV into OPG. These items 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.

ii. Financeability

- 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.

iii. Cost of Financing

- Future governments may enact legislation that changes the right of the SPV to recover amounts from customers.
- The right to recover amounts from future customers must be irrevocable and subject to full recovery from the government in the event that future governments reduce or eliminate the recovery. A legal structure that is weaker than the precedent US transactions increases the risk to debt holders and the cost of financing.
- Interest rates on bonds in the securitization market are higher than equivalent rated bonds. Rate for a AAA securitization credit is about 50 bps higher than GOC (rated AAA) for a 5 year term. This difference is attributable to the specialized structure of the bond, smaller investor pool for this bond, smaller size of the market and higher perceived risks of the bond.
- Any regulator involvement must not be seen to modify any terms of debt issued or the property right securing the debt as this would increase risk to debt holders.

- It may not be possible to issue debt to match the terms of the deferred asset so shorter term debt would be used which raises risk to re-finance the maturing debt as the market may no longer be interested in this product. As well, underlying reference interest rates may be higher and the market may require a higher spread to invest in this product.
- With the GA Recovery Right program continuing for 10 years, debt issued over this period is subject to changes in both the underlying reference interest rates and appetite of the market for this product.

iv. OPG Credit Rating

- Minimizing the impact of significant additional debt on OPG's credit rating is dependent on higher EBITDA arising from earned income on the GA Recovery Right in excess of external debt. Ability of the SPV to record revenue reflecting the growth in asset value.
- Potential OPG credit rating downgrade if legislative structure is not adequate to support long term recoverability, inability to record revenue from growth in asset value or agencies view equity injection as debt.
- OPG credit rating downgrade could result in loss of GBE status or result in SPV being consolidated directly with the Province.

Attachment 1

LEGISLATIVE REQUIREMENTS TO ALLOW DEFERRAL OF GLOBAL ADJUSTMENT AMOUNTS TO BE FINANCEABLE

The IESO currently has a right to collect GA monthly from ratepayers through provisions in the *Electricity Act, 1998*. It is proposed that collection of a certain portion of the monthly GA be deferred for collection in the future, and that the right to recover the deferred GA from ratepayers be used as a basis for structured financing/securitization.

The current proposal is for a trust to be created as a financing vehicle (the "**Trust**") in connection the deferred GA. The Trust will finance the deferral of the GA by purchasing the right to recover such deferred GA from the IESO for the principal amount of the GA being deferred. For example, if the amount of GA that is being deferred is $200 million in a given month, the Trust will purchase from the IESO the right to future recovery of the deferred GA and the associated financing costs (including interest and transaction costs) for $200 million in cash.

The Trust is expected to finance these purchases from the IESO through a combination of senior secured financing raised in the capital markets and subordinated financing from OPG (the funding for which will mostly be from equity injections from the OEFC/Province).

For accounting purposes, OPG will need to have the ability to direct the activities of the Trust, through a services agreement and/or through the Trust's constating document.

Based on securitized financing raised by utilities in the US (backed by utility cost recovery orders) and the current regulatory framework in Ontario, the legislation in Ontario would need to be amended to provide the following, at a minimum:

1. The IESO will be empowered to create an asset (the "**Regulatory Asset**") consisting of all right, title and interest in and to:

   (a) right to recover from and bill Ontario electricity ratepayers for:

   (i) the principal amount of GA that is being deferred for collection;
   (ii) all interest and other financing costs incurred in respect of the deferral of the GA (whether through senior debt raised in the public markets or subordinated debt raised from OPG or others); and
   (iii) (subject to the comments in paragraph 5 below in respect of OPG's internal administrative costs only) all fees, expenses and other administrative costs associated with such financing, including up-front and ongoing financing costs and any indemnity payments;

all on such repayment/amortization schedule as agreed by the IESO and any purchaser of such right (or pursuant to a pre-defined schedule/formula in the legislation that covers all of the purchaser's principal, interest and ongoing financing costs on a monthly basis); and

(b) all revenues, collections, claims, rights to payments, money or proceeds arising from the rights and interests set out in paragraph (a) above, regardless of whether such revenues, collections, claims, rights to payments, money or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, rights to payments, payments, money or proceeds.

2. The IESO may dispose of the Regulatory Assets created from time to time on such terms as the IESO determines in accordance with the terms of directives to be issued to the IESO from time to time by the Minister, provided that any such disposition shall be a true sale and absolute transfer of the IESO's right, title and interest in and to a Regulatory Asset to the purchaser of the Regulatory Asset.

3. The Regulatory Assets will not be subject to any set-off, counterclaim or other defence by the IESO or any successor or affiliated entity thereof.

4. The legislation will need to recognize the Regulatory Assets as amounts that may be recovered by the IESO (e.g. it could be designated as a "GA Deferral" and would be included in the amounts collectible by the IESO through the GA collection mechanism, and would include interest and financing costs).

5. The purchaser of the Regulatory Asset will have the right to require the IESO (or any successor) to collect the principal amount of GA deferred, together with interest, financing and administration costs, on the agreed repayment/amortization schedule. **[NTD: In the LIPA securitization rate order, if the entity that is authorized to collect rates to service the bonds ends up defaulting, there is the ability to request a court to order "sequestration" and payments of amounts owing to the owner of the Regulatory Asset. Consider whether to include a similar right here. Alternatively, consider whether a security interest over the moneys collected by the IESO could be provided to the purchaser.]**

OEB would be provided with oversight over the internal administrative costs collected by the Financing Trust. This could be accomplished by (a) providing the purchaser of the Regulatory Asset with the right to require

the IESO or a successor to collect only the principal amount of GA together with interest and financing costs and third party fees and expenses, and (b) requiring the IESO to collect amounts through the global adjustment and make payments to the purchaser of the Regulatory Asset with respect to the internal administrative costs incurred by the purchaser in connection with the purchase and management of the Regulatory Asset and the Financing Trust, in accordance with the order of the OEB then in effect. Under this mechanism, the OEB would be required to review the purchaser's internal administrative costs through a streamlined process and issue such orders in accordance with rules to be prescribed under a new regulation under the OEB Act, which would clearly limit the OEB's scope of review and could establish the basis for the purchaser to receive an appropriate fee for its services.

6. In the event that any action is taken or permitted by the Province or any regulatory authority that limits, alters, or impairs the value of a Regulatory Asset or reduces the ability of the IESO or the purchaser of the Regulatory Asset to collect or recover the costs associated therewith, the owner of the Regulatory Asset and the holders of any bonds or other securities issued to finance the purchase of the Regulatory Asset, will have a right of action against the Province for any damages suffered as a result of such amendment.

Attachment 2

STATUTORY AMENDMENTS

The following is preliminary and is based on our current understanding of the proposed structure and objectives. For example, we have assumed that the structure will not entail the insertion of a new Holdco between OPG and the Province. As these aspects are refined, some of the suggested amendments described below may not be needed and other aspects that we are not aware of may need to be considered. Accordingly, these suggested amendments are provided for discussion purposes and are subject to change. We would welcome the opportunity to work with OPG and the Ministry on refining the scope and substance of required legislative and regulatory amendments.

A. Amendments to Implement Structure

Certain *Electricity Act, 1998* amendments would be needed to implement the anticipated structure (which we understand, as noted above, would not include a Holdco), as follows:

- **Section 53.1(1):** Amend to permit owning and operating generation facilities through subsidiaries (not only directly through OPG). In addition, amend to permit OPG to administer, manage, loan moneys to and have a beneficial interest in, if applicable, Financing Trust.

- **Section 53.2:** Amend to permit the Minister to acquire, hold, dispose of or otherwise deal with securities or debt obligations of, or any other interest in, OPG or any subsidiaries. This is to accommodate possible variations to the financing structure that may be desirable over time.

- **Section 53.■ (new):** New statutory section to permit the Minister to enter into arrangements relating to an exercise of powers under 53.2.

- **Section 53.■ (new)**: New statutory section providing that creditors of Financing Trust have no recourse to the assets of OPG or any of its subsidiaries (other than Financing Trust, if applicable). In addition, consideration should be given as to whether the Act should be amended so that the Financing Trust cannot be wound up or liquidated.

B. Miscellaneous Corporate Items to Address

- **OPG Articles:** Amend the OPG's articles to remove the private company restrictions.

- **MOA with Province:** Consider whether any amendments to OPG's MOA with the Province are required to contemplate the Financing Trust.

C. Amendments Under Electricity Act to Implement GA Smoothing

Based on our understanding that the global adjustment smoothing mechanism is intended to benefit residential and small business customers only and that the Minister will be responsible for determining how much global adjustment smoothing is to be applied in a given month, if any, amendments to the *Electricity Act*, *1998* and Ontario Regulation 429/04 (Adjustments Under Section 25.33 of the Act) would be needed to implement the mechanism, as follows:

(i) Electricity Act:

- **Section ■ (New):** Establish a new power for the Minister to make directives to the IESO in relation to the global adjustment smoothing mechanism and, particularly, for purposes of establishing global adjustment smoothing amounts from time to time (expected to be monthly). To the extent possible, the directive power should be drafted so as to limit the ability for a future Minister to require the IESO to do anything that would materially and adversely affect the Financing Trust or its lenders. **[NTD: While our understanding is that the Minister would direct this, we note from other materials we have seen that OPG may instead be recommending a formula approach. It is not clear what the formula would look like, where it would be set out or how it would be applied and by whom]**

- **Paragraph 25.33(1):** This section says that IESO shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of market participants reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require IESO to ensure that, over time, payments by prescribed classes of market participants also reflect amounts paid to Financing Trust. **[NTD: Not certain this is needed if only to benefit residential and small business consumers, who are not market participants. May be needed in reference to payments from distributors and retailers]**

- **Paragraph 25.33(2):** This section says that distributors and retailers shall make adjustments in accordance with the regulations to ensure that, over time, payments by prescribed classes of consumers reflect amounts paid to OPG, OEFC and distributors, as well as amounts paid to entities with whom IESO has a procurement contract. Add new subsection (c) so as to require distributors and retailers to ensure that, over time, payments by prescribed classes of consumers also reflect amounts paid to Financing Trust.

- **Note**: As described below, the regulation will need to include new requirements for the IESO to record the global adjustment smoothing amounts in one or more variance accounts and to use those amounts to offset amounts otherwise recorded in the variance accounts under Section 25.33(3) of the Act. For context, we note:

    - Section 25.33(3) says that adjustments under (1) or (2) relating to electricity consumed by consumers whose rates are determined by

the OEB under s. 79.16 of the OEB Act (i.e. RPP Customers) shall instead be made in accordance with the regulations to one or more variance accounts established and maintained by the IESO.

- Section 25.33(4) says IESO, distributors and retailers shall make and receive such payments, set-offs and credits as may be required or permitted by the regulations with respect to consumers described in (3), i.e. RPP Customers.

- Section 25.33(5) says that IESO shall establish and maintain such variance accounts as may be needed to record all amounts payable or receivable by it under 25.33.

(ii) O. Reg. 429/04 (Adjustments Under Section 25.33 of the Act):

- **Section 1(1):** Consider adding definitions for "Financing Trust" and "global adjustment smoothing amount" or such other terms as may be preferred.

- **Section 1.2(1) (New):** Add section providing that, for the purposes of this Regulation, the global adjustment smoothing amount for a month is the amount determined by the IESO in accordance with a directive from the Minister under section ■ of the Electricity Act in respect of the month. **[NTD: See above note re use of Minister directives]**

- **Section 1.2(2) (New):** Consider adding a section providing that the IESO shall publish the global adjustment smoothing amount for a month by no later than the 10th business day of the following month [to align with general publication requirements for global adjustment under s. 1.1(2)].

- **Section 10(1):** Amend formula for calculating Class B GA rate by subtracting the global adjustment smoothing amount for a month from "M", which is the total amount of the global adjustment for the month. The global adjustment smoothing amount could be designated as "X", such that the formula would be (M-X-N)/(P-Q). Define "X" as the global adjustment smoothing amount for the month as determined by the IESO in accordance with the Minister's directive under section ■ of the Electricity Act for the month. **[NTD: See above note re use of Minister directives]**

- **Section 10.1 (New):** Add new section to deal with adjustments under subsection 25.33(3) of the Act, i.e. in respect of RPP consumers. This section should require the IESO to establish, within the variance account(s) it maintains pursuant to subsection 25.33(3) of the Act, one or more subaccounts in which it shall record the global adjustment smoothing amounts applicable to the classes of consumers described in subsection 25.33(3) of the Act. This section must also specify that the IESO shall apply the amounts recorded in the subaccounts against the balances in the variance accounts for purposes of section 79.16(3) of the OEB Act.

  - **Note:** This is a key aspect because, when the OEB determines RPP rates, it must take into account the balances in the variance accounts established by the IESO under s. 25.33 of the Electricity Act and make adjustments with a view to eliminating the balances within 12 months. This proposed new section 10.1 causes the IESO to reduce (in the near term) the variance account balances by the global adjustment smoothing amounts, as provided by Financing Trust, thereby enabling the OEB to determine RPP rates that, despite being lower for RPP consumers in the near term, still eliminate the relevant variance account balances within 12 months.

- **Paragraph 11(2)2.ii:** Amend the formula for calculating the allocation of global adjustment for a month to a licensed distributor that is a market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x (R+S-T)]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 11(2)3:** Amend the formula for calculating the allocation of global adjustment for a month to each Class B market participant by subtracting the global adjustment smoothing amount for a month from "M", which has the same meaning as under section 10(1). The global adjustment smoothing amount could be designated as "X", such that the formula would be [(M-X-N) x U]/(P-Q). Define "X" as suggested under section 10(1).

- **Paragraph 16(7)4:** Consider amending the description of "Global Adjustment" that is required to be included on certain invoices so as to inform consumers that their portion of the global adjustment for the month (i) may have been reduced by the application of a global adjustment smoothing amount from the Financing Trust, or (ii) may include amounts payable to the Financing Trust in respect of global adjustment smoothing amounts previously applied.

- **Section 20(1):** This section establishes an obligation for the Ontario Electricity Financial Corporation and every licensed distributor that is a market participant to give the IESO such information as the IESO may require for the purposes of the Regulation in the form specified by the IESO and before the expiry of the period specified by the IESO. Consider amending to extend this obligation to the Financing Trust.

- **Section 20(6):** This section provides that on request by the OEB, the IESO, a licensed distributor, an embedded generator, a retailer or the OEFC shall give the OEB such information relating to this Regulation as the OEB may require, in the form and within the period specified by the OEB. Consider amending to extend this obligation to the Financing Trust.

D. Amendments Under OEB Act to Implement Cost Recovery for Financing Trust

Amendments to the *Ontario Energy Board Act*, including amendments to O. Reg. 95/05 (Classes of Consumers and Determination of Rates) and the introduction of a new regulation, would be needed to implement a cost recovery process for the Financing Trust in relation to the global adjustment smoothing mechanism, potentially with limited OEB oversight, as follows:

(i) Ontario Energy Board Act:

- **Section 78(3.3):** This provision establishes an obligation for the OEB, when determining rates for the retailing of electricity, to take into account balances in variance accounts established under section 25.33 of the Electricity Act and to make adjustments "with a view to eliminating those balances within 12 months or such shorter time periods as the Minister may direct." Consider whether any amendments are needed, and confirm this works with the framework being proposed.

- **Section 78.7 (New):** We understand that the Province may want the OEB to have an oversight role. One possible approach would be to establish a new statutory section establishing that the IESO shall make payments to the Financing Trust with respect to the internal administrative costs incurred by the Financing Trust in connection with the purchase and management of the Regulatory Asset and the Financing Trust. Such payments by the IESO would need to be made in accordance with the order of the OEB then in effect, which orders shall be made by the OEB in accordance with rules prescribed under a new regulation.

    - The new regulation would need to be clear that the OEB does not have jurisdiction to consider the principal amount or any interest, financing costs, third party fees or expenses. Rather, OEB's role would be limited to considering the internal administrative costs of the Financing Trust and ensuring the Financing Trust receives an appropriate fee for its services, all of which would be recovered by the Financing Trust from the IESO, which would collect those amounts in the global adjustment. Note that, if this approach is accepted, the IESO and distributors and retailers would need the authority to collect such amounts as part of the GA and IESO would need the authority to pay such amounts to the Financing Trust. As such, additional amendments would be needed under O. Reg. 429/04.

- **Note:** Section 79.16 of the OEB Act does not require changes, but the significance of this provision should be understood.

    - Section 79.16 gives the OEB responsibility for determining electricity commodity prices for eligible consumers. Eligibility is determined under Reg. 95/05 (Classes of Consumers and Determination of Rates), which is also known as the Regulated Price Plan (RPP) Regulation.
    - Section 4(2) of the RPP Regulation defines RPP-eligible consumers as low volume consumers (i.e. those who annually use less than 150,000 kWh

or such other amount as prescribed), consumers with demand of 50 kW or less, residential consumers that have accounts with distributors, consumers who annually use 150,000 to 250,000 kW of electricity, and consumers who have accounts with distributors if in the farming business.

- Paragraph 6(1)3 of the RPP Regulation provides that "In determining the rates (for RPP-eligible consumers), the Board shall forecast the cost of electricity to be consumed by the consumers to whom the rates apply, taking into consideration adjustments required under section 25.33 of the *Electricity Act, 1998* and shall ensure that the rates reflect those costs."
- The Ontario Energy Board has developed a Regulated Price Plan Manual (revised February 16, 2016) to describe the processes and methodologies it uses for determining electricity commodity prices that are charged to RPP consumers pursuant to Section 79.16 of the OEB Act and paragraph 6(1)3 of the RPP Regulation.

(ii) O. Reg. 95/05 (Classes of Consumers and Determination of Rates)

- **Paragraph 6(1)3:** Amend so as to require the Board, when forecasting the cost of electricity to be consumed by the consumers to whom the rates apply, to take into consideration not only the adjustments required under section 25.33 of the Electricity Act but also the application or prior application of global adjustment smoothing amounts determined by the IESO in accordance with Minister directives under section ■ of the Electricity Act, and to ensure that the RPP rates reflect those amounts. **[NTD: See above note re use of Minister directives]**

(iii) New Regulation (Payments to the Financing Trust)

- If the OEB is to be given the role of reviewing and approving the recovery of OPG's internal administrative costs for the Financing Trust under the potential section 78.7 (see above), then this regulation should describe the process and criteria pursuant through which the OEB would determine the amounts that the IESO would be required to collect through the global adjustment, in accordance with section 25.33 of the Electricity Act, and pay to the Financing Trust in respect of the provision of global adjustment smoothing amounts. This part of the regulation should establish:

    - any reporting requirements from the Financing Trust and/or the IESO to the OEB in connection with the global adjustment smoothing mechanism;
    - the frequency of the OEB making determinations under this part of the regulation;
    - the process through which the OEB shall make these determinations, which should be a streamlined administrative process rather than a public hearing process or, if a hearing is needed, then the scope of the proceeding should be clearly and narrowly constrained so as to deter intervenor involvement, lengthy proceedings and reduce/eliminate risk to recovery by Financing Trust;

- the basis for the OEB's determinations as to the payments that shall be made to the Financing Trust, which should specify that:
  - the Financing Trust shall recover its prudently incurred internal administrative costs on a forecast basis each year;
  - the Financing Trust shall receive an appropriate fee each year (with some guidance as to what would be appropriate); and
  - the approved payment amounts shall be collected by the IESO through the global adjustment and paid to the Financing Trust in accordance with the order of the OEB then in effect. Note that O. Reg. 429/04 would likely need amendments to permit IESO (and distributors and retailers) to collect these amounts through the global adjustment.

GA Smoothing – OPG Accounting Considerations

- An SPV/Trust is a stand-alone entity able to conduct business separately under a Trust agreement

The conditions required for OPG to consolidate the SPV/Trust are outlined in the following table

Issue	Response
1. Decision Making	• OPG must have decision making authority on the operation of the SPV/Trust (without a veto right by the Province), including naming of trustees, establishing operating plans and budgets, setting or changing financing policies. • The SPV/Trust while operating within the legislation, must be controlled by OPG to operate freely and to alter terms and conditions not specified in the legislation to ensure recovery of the deferred amounts
2. Business Risk	• The SPV/Trust must have variability of returns as a normal business enterprise would, including such things as interest charged on deferred amounts, decisions on how to finance these deferred amounts, the ability to make / lose and keep any spread from financing
3. Funding	• The Province cannot directly or indirectly fund more than 50% of SPV/Trust or any investment in the SPV/Trust • OPG must own at least 50% of the most exposed equity /sub-debt in the SPV/Trust
4. Directive	• Directive that is issued should not be prescriptive or direct OPG to set up this business. The directive should only be “guiding” i.e. to allow OPG to evaluate options and put forward to the OPG Board a recommended plan for Shareholder approval

GA Smoothing – OPG Accounting Considerations - continued

Issue	Response
5. Other required Attributes:	The legislation that supports the formation of the SPV/Trust must have the following attributes: • Must require interest, carrying and administrative costs be paid to the Trust to allow for Revenue recognition • The amount to be deferred must either be specified or be calculated based on a specific formula that is not subject to ongoing decision making by the Province. **The Province cannot have the ability to override this formula** • Legislation should be written to avoid the possibility of being revoked with wording to ensure the SPV/Trust and its debt holders would have their capital guaranteed and paid for directly by the Province if such a situation were to happen • The spirit of the legislation should be reflected in the Trust Indenture Agreement

GA Financing Structure Requirements

KEY ELEMENTS REQUIRED TO ENSURE THE DEFERRAL OF GA CHARGES CAN BE FINANCED:

Creation of Strong Property Rights

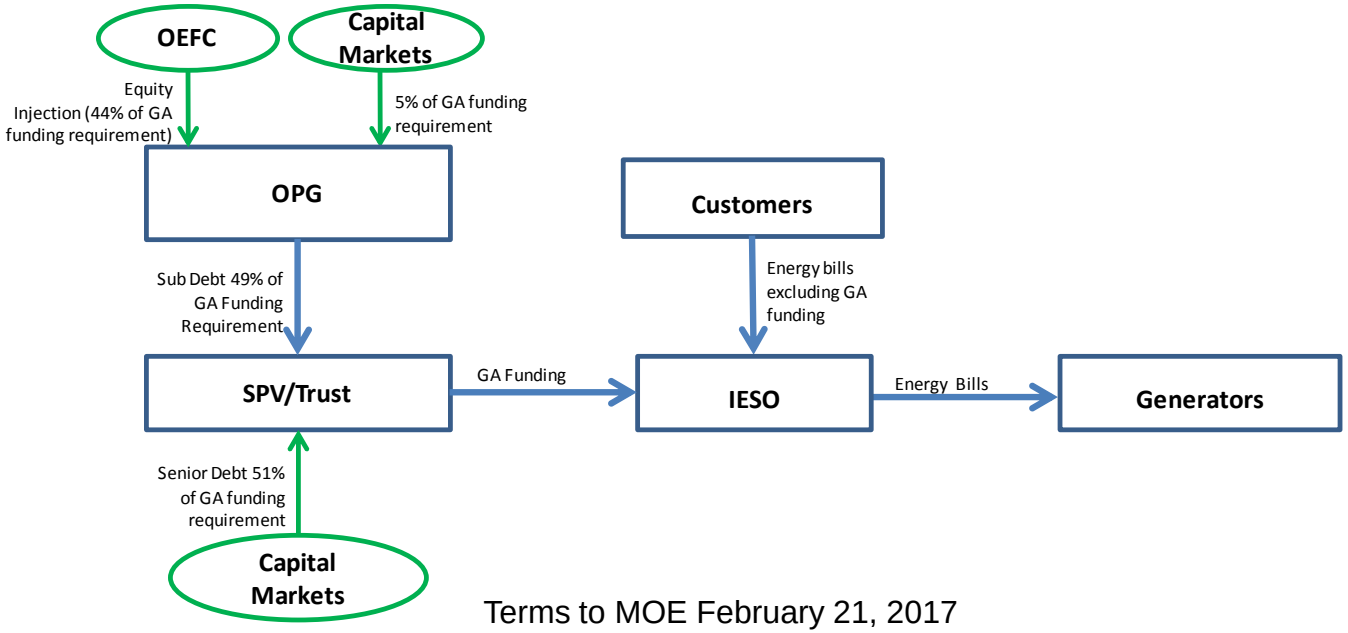
- Legislation enshrines the ability of the IESO to create a Right to charge customers in the future for the Global Adjustment (GA) deferred today including principal amount deferred, interest and other financing costs on the amount deferred and fees, expenses and other administrative costs.
- The Right can be sold to an appropriate Trust or Special Purpose Vehicle (SPV) to obtain funds to pay amounts due to generators under contracts or regulation. These SPVs are generally single purpose entities with no other operations that could add risk to the entity, dilute debt holder rights, allow parties from other operations to claim rights to the future recovery from customers or allow these other parties to initiate bankruptcy proceedings.
- Right must be irrevocable and if the Right is amended by future governments the debt holders have the right of action against the government to recover the amount outstanding including interest, fees, expenses and any damages resulting from the amendment.
- Right must specify the recovery period or the mechanism for setting the recovery rate including true up of the rate to ensure all amounts are recovered

Economic Factors

- Limits on the recovery amount (principal, interest, fees and expenses) charged to customers in future periods must have compensating elements such as longer recovery period to ensure the full amount deferred plus interest, financing and other administration costs is recovered from customers.
- Need to balance customer relief with debt holder risk. Longer recovery periods and larger deferred balances increase risk to the debt holder of future government intervention.
- The amount required by the SPV to purchase and service the Right will be funded 51% from debt holders, 5% from OPG through capital markets and 44% from OPG via equity injection to OPG from the Province. The funding from OPG will be loaned to the SPV as subordinated debt.

GA Financing Structure Requirements - continued

- SPV will be used to raise the GA financing and ring fence OPG from its legal obligations
- SPV will be structured to allow for GBE accounting consolidation into OPG
- Given that SPV will be consolidated into OPG for accounting purposes, the significant amount of debt required to fund the GA deferral will have a severe impact on OPG's credit rating. If 100% of the requirement is funded by debt OPG would be downgraded.
- To manage this exposure and minimize the cost of funding. The required funding would be split into 2 buckets:
    1. 56% from capital markets, and
    2. The remainder provided by the Province via equity injection, which would be loaned to SPV as subordinated debt.
- The use of equity to fund a portion of the GA deferral also allows for an improvement in both Net Income and EBITDA as incremental revenue is captured by the increase in the value of the deferral which would offset the fiscal impact of the borrowing at Province level.
- Credit rating metrics are generally maintained within established limits.



From: Gadi Mayman
To: Mike Manning; Ken Kandeepan
Cc: Christina Zhang
Subject: FW: Provincial Guarantee
Date: Monday, February 27, 2017 12:49:29 PM

Hi Mike,

Ken is familiar with what I'm asking about here, so either he or I could fill you in on more details if you'd like. The bottom line is that OPG has now determined, not surprisingly to me, that the debt that they issue to public markets for the GA smoothing option, would require a provincial guarantee. Not a full guarantee, they pointed out this morning, but just a guarantee that investors would be made whole, and have all of their costs covered, if a future government were to change the legislation under which this structure would be created. To me, that is pretty much equivalent to a full guarantee, as that's likely the only way the system fails, and investors would take on any risk.

My question is why that guarantee, and therefore the diminishment of risk to investors, is treated differently from an accounting perspective than the simpler process of us just borrowing and on-lending to them.

Please let me know if you have any questions, or would like to discuss this further.

Thanks,

Gadi

From: Gadi Mayman
Sent: Monday, February 27, 2017 12:45 PM
To: HARTWICK Ken -FINANCE
Cc: 'cindy.veinot@ontario.ca'
Subject: Provincial Guarantee

Hi Ken, we all had to rush off to our next meetings following our meeting this morning, so we didn't get a chance to have a discussion about why a Provincial guarantee of all of OPG's debt related to the trust isn't a problem for the accounting treatment that we'd need to get to in order to make the GA smoothing plan work, while direct borrowing and on-lending from the Province would be, if it's greater than 49% of the total borrowing (actually 44% in your current model).

From a capital markets, investor and rating agency perspective, the guarantee is extremely likely to be lumped in with the rest of the Province's debt, and the guaranteed debt would be considered just as much of a provincial obligation as the rest of our debt, particularly in this case where the reason that the guarantee is needed is because investors will demand it in order to protect themselves from legislative amendments by a future government. For that reason, it could be hard to justify, from a capital markets or cost perspective, having OPG borrowing in its own name with a government guarantee, so is it possible to revisit the potential accounting treatment and determine whether, now that we've effectively moved to

a guaranteed structure, we could just have the Province, through the OFA or OEFC, do all of the borrowing and on-lend to OPG? Is this something that you'd been planning to address in the accounting material that you're sending over today?
Thanks,
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From:	Anna Strathy
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Gavin He
Subject:	FW: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Thursday, April 20, 2017 2:22:50 PM
Attachments:	the-economic-cost-of-electricity-generation-in-ontario-april-2017.pdf

Gadi wanted to flag a few items raised at the Rate Mitigation meeting this morning, summarized in Scott's email below. Please see highlighting and my notes in red text.

Anna

From: Gadi Mayman
Sent: Thursday, April 20, 2017 1:40 PM
To: Ronald Kwan ; Ken Kandeepan ; Mike Manning
Cc: Anna Strathy ; Gavin He
Subject: Fw: Rate Mitigation Implementation Meeting - April 20, 2017

From: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca>
Sent: Thursday, April 20, 2017 11:51 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Hi Dave,

Here is my next installment of Thursday OFHP. Note that I have attached a report from IVEY, referenced later in the document.

- AG discussion (Yesterday):
  - ENE Lead, walked through the March technical briefing presentation
  - TBS DM suggested that this was the first of several meetings and considers this to be a high level, first pass
    - Lots of moving pieces where the Province does not yet have clarity
    - Will take back questions and will respond once it has more certainty on structure
  - The AG and staff had the following questions:
    - Legislative precedent of shifting ratebase to tax base, and can the tax base support these additional charges?
    - Why use trust mechanism for Affordability Fund, and should the Trust be consolidated?
    - Seeking more details on the accounting for the OFHP and wanted reports to justify what is set out in the Budget
    - Also seeking independent studies to back up 30 year contracts (ENE referenced Ivey report)?
    - Asking about mechanics of the OPG Trust, OEFC lending etc.?
    - What was used to brief the FAO?
- Legal Update
  - Timing Update
    - Pens down now on the 28th
    - May 9th TB
    - May 10th Cab
    - May 11th introduction
  - Latest large legal discussion took place on Monday

- This was the first run through of legislation draft (up to that point discussions focused on turns of instructions to leg. counsel)

o Current Status
- Turning a new draft today
- Trying to find balance and working through all the wording from various parties (some of which is inconsistent)
- Received very detailed feedback from OPG / Torys and others
- In all-night drafting stages
- Trying to balance stakeholder consultation time and drafting time

o Tension between enabling the transaction in legislation and embedding the transaction in legislation – Gadi noted that the strong preference at the meeting was for the legislation to enable the transaction (while the bankers would prefer to embed the transaction in the legislation).
- Determining how many questions need to be answered now and what can be pushed to regulation / commercial agreements
- Legislation will include indications to regulations, but will not have all filled in
- Difficult because American examples embed transaction in legislation

o At least one more turn of legislation
- If comments quickly, may be able to turn more than once
- Seeking comments by no later than Sunday

o Business Issues
- Guarantees
  - General powers to be enabled in legislation and details will flow in regulations / commercial arrangements
  - MoF / TBS suggests Minister of Finance should have power to provide guarantees under FAA – rather than a guarantee provided by the Minister of Energy, as the legislation currently sets out.
  - First ask from dealers included several elements that would likely not be palatable to the Province
    - For example, a make-whole penalty which creates a very expensive break fee – Gadi stated strong opposition to the make-whole penalty; with support from Ministry of Energy and OPG
  - OPG and OFA to develop a set of proposed guarantees, rather than negotiating with dealers
- OPG requires cash flows immediately (interest payments starting on Day 1)
  - Need to meet this objective while meeting the Province's commitment to reduce rates by 25% and maintain increases at inflation for next 4 years
  - Without these payments there would be an adverse effect on credit metrics, and earnings (fiscal)
  - Response:
    - IESO will pay interest costs to OPG Trust on an ongoing basis, funded through its line of credit, resulting in a larger deferral
    - OPG Trust would then purchase the deferral from IESO (consistent with mechanism already being contemplated)
    - Need to determine accounting impact to IESO, KPMG's preliminary view

is that this will work

- Should Province / OPG be targeting AAA rating and what is the impact of Provincial guarantees?
  - Interaction with required Provincial guarantees
    - Fed example of Muskrat Falls, no make-whole, convert to Canada bonds, still trades 80 bps back from Canada
  - Regardless of rating, will trade back from Ontario
  - S&P tends to focus on back-stop more so than Moody's, DBRS, so may have a split rating
    - S&P more focus for US investors so may not be as relevant if Canadian focus initially
  - AAA rating helps for securitizations and important to aim as high as possible given unique structure (needed in order to attract those investors
  - Important target, but need to avoid setting up potential expense of $100s of millions in break fees

o Approvals for equity injections

- Need to have appropriation approvals in TB sub
- Focus on an annual approvals process, followed by a streamlined monthly flow of funds
- EIGS (me) to work through this with OFA, OPG and TBS and report back

o Con Law issue

- Navigant engaged by ENE and working through an analysis of the underlying life of assets
- Lawyers working on reverse engineering legislation to ensure it is constitutionally sound

- OPG Update
  - Special Board committee yesterday to briefing on status of legislation
  - Formal approval May 5th from Board
  - Accounting letters now working through process (E&Y letterhead, they are in agreement)
  - Credit Rating process
    - Will approach rating agencies post-regulations, with a framework for commercial agreements
    - OPG anticipates ~1 month to receive preliminary view from rating agency
    - And a few additional weeks to finalize
    - Final rating will come once contractual arrangements are in place
  - OPG working with IESO on operations and framework of how the purchase and sale agreement will work
    - Iterative process starting now
    - Will need to move as legislation / regulation develops
- IESO Update
  - Discussions with OFA on enhanced LoC underway
  - Accounting opinion in development
    - Main focus on risk to IESO in event OPG in future does not purchase the asset (need recoverability from ratepayers without taking away from rights of the

Trust); dealers do not want to keep layering on additional charges to ratepayers
- Ok if Province owns separate cash flow, but not so comfortable if IESO then sells to a separate financing entity (worried about prioritization)
- Can the Province backstop without a fiscal hit on the entire transaction structure

- IESO IT Audit
  - May be looking into Market Surveillance Panel functions
  - Meeting Tuesday afternoon with AG on the OFHP (plan to state this is still in process)

- OEB
  - Today the RPP for May will be announced
    - Taking into account all elements of the Fair Hydro Plan that seemed prudent to include
    - OEB seemed to suggest 50% now and remaining 50% dependent on legislation implemented so anticipate a further change to rates on July 1
  - Need more details on OEB's anticipated role in setting up regulatory assets

Social Programs

- RRRP
  - Meeting of LDCs earlier in the week (43 attended)
  - ENE provided update on activities underway
  - Re-enforced need for updates to systems by July 1, and LDCs were receptive
  - Discussed bill presentment and LDCs were comforted that only limited changes needed now, more extensive changes in the fall
- OESP
  - Working through legislative changes in support of this initiative
  - MCSS and ENE working to get to automatic enrollment, and appear to have a path
  - Discussions with CRA underway, received message that this is a priority to remove wet signature requirement
- FN rate
  - ENE sitting down next week (Wed) to discuss operationalizing credit with COO
- Affordability Fund
  - Advisory committee met on Tuesday
    - Consensus on selection of Trust representatives
      - Hydro One, Alectra, Thunder Bay Hydro
      - Ottawa-Carleton United Way, Advocacy Centre for Tenants of Ontario
    - Will follow up on specific representatives from those organizations
    - Given AG questions, important to move on this as quickly as possible

ICI

- Shifted beyond approvals
- Working with OCE and CME on outreach campaigns
  - Asked to participate in next AGM of OCE to provide overview of ICI
- Also coordinating with LDCs to advise them of changes

Other Updates

- TB May 9th
  - Will include social programs

- GA smoothing legislation
- Appropriation approval for equity injection

- IVEY Energy Centre released a report that walked through the merits of GA Smoothing (attached)
- Will re-schedule the next meeting for Tuesday, recognizing budget release date is next Thursday

IVEY Business School
WESTERN UNIVERSITY · CANADA
Energy Policy and Management Centre

Policy Brief
April 2017

The Economic Cost of Electricity Generation in Ontario

EXECUTIVE SUMMARY

- The overall cost of electricity generation, which accounts for almost two-thirds of Ontario's total system costs, has increased significantly since 2005 mainly due to a substitution away from coal generation towards more costly renewable sources, and a parallel increase in the total amount of installed capacity in the province, notably due to an expansion in the amount of natural gas capacity.
- The unit cost of electricity generation is approximated by the sum of the wholesale market price and the Global Adjustment. Wholesale market prices reflect, in part, short-run variable costs, but often fall short of the total cost of producing electricity, which includes significant fixed capital costs. The Global Adjustment is a mechanism that, in conjunction with the wholesale hourly market price, ensures recovery of variable and fixed generation costs. As such, the Global Adjustment is not an overpayment but a component of the full economic cost of generating electricity.
- Recent increases in consumers' electricity bills have been driven in part by the rapid expansion of generation capacity in the province, much of which has been financed under 20 year contracts with private firms. Current rates and electricity bills could be reduced by amortizing contracted generation capital costs over longer periods to match the productive lifespans of the assets, often longer than the contracted terms. The cost of generation charged on consumer bills would then more closely reflect the economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term.

INTRODUCTION

This report brings an economic perspective to the analysis of electricity generation costs and prices in Ontario. Generation accounts for approximately two-thirds of Ontario's total electricity system costs, making consumers' electricity bills particularly sensitive to changes in generation policies and the cost of ensuring that sufficient generation capacity is available to meet demand. In Ontario, the wholesale price of electricity generation has declined since 2006, yet regulated rates for household consumers have almost doubled, creating confusion over the reasons why bills have increased. While a comprehensive analysis of electricity system costs and consumer bills is outside the scope, this report provides an economic cost analysis of the generation component of electricity bills, which can reconcile these seemingly contradictory trends. An important insight, which comes from the experiences

of jurisdictions that have deregulated their power generation sectors, is that wholesale generation markets are often distorted by the effects of administrative restrictions on market operations and by parallel long-term contracting policies, undermining the signals that market prices would otherwise provide for efficient generation production, investment, and consumption decisions. In such markets, wholesale market prices are shaped in part by strategic bidding behaviour of generators, and need not accurately reflect underlying average or marginal costs of generation. Consequently, a complete account of the cost of generation, and its pricing, requires a broad analysis that incorporates a range of generation sector policies.

WHOLESALE ELECTRICITY MARKETS AND INVESTMENT IN GENERATION CAPACITY

In competitive markets with many buyers and sellers, homogenous products and firms, and unrestricted exit and entry, market prices send crucial signals to firms and consumers, and help balance demand with supply. Importantly, these conditions create a close relationship between prices and costs since competitive pressures push prices to the marginal cost of production. External shocks to demand or supply that shift prices will cause firms to enter or exit the market, moving prices to long-run average cost levels over time. For example, an increase in demand that increases prices will encourage new firms to enter the market, subsequently exerting downward pressure on prices. In the long-run, market prices enable firms to recover both fixed and variable costs, and to earn a normal rate of return on capital invested. Hence, in competitive markets, prices are an indicator of the long-run cost of producing goods and services.

Wholesale electricity generation markets, however, generally do not conform to the ideal of an unfettered competitive market (Borenstein, 2016). The distinctive characteristics of electricity markets are many and well known. Electricity is not storable in large quantities so production must match extant demand. Renewable power sources are intermittent, necessitating complementary investment in dispatchable generation capacity that may have low utilization rates. Transmission and distribution are subject to congestion, creating conditions for oligopoly or even monopoly pricing. Demand is highly price-inelastic in the short-term for many consumers, implying consumers are willing to pay high prices for electricity. Variable costs of production are small relative to high fixed costs, especially for renewable power sources, meaning variable costs can be significantly lower than average costs. Renewable power, which governments have encouraged for environmental reasons, often has higher average unit costs than fossil fuels, often requiring additional policy instruments to support private investment. Entry by new generators is highly regulated, and it can take many years for permitting and construction to be completed, leading to extended periods of under- or over-supply of capacity. Under such conditions, wholesale electricity market prices can diverge from average costs for long durations, creating an uncertain investment environment for generators. Two risks are particularly germane:

First, small shocks to demand or supply can lead to rapid escalation in wholesale market prices given short-run price-inelasticity of demand and supply. For instance, in Ontario during September 2002, even though the average price over the month was $83/MWh, it peaked at $1028/MWh, more than twelve times the average. Price spikes reflect scarcity and are a feature, not a flaw, of a well-functioning market. However, dramatic price spikes often create consumer pressure on governments to intervene and reduce volatility by implementing caps. In Alberta, the government capped wholesale market prices at $1000/MWh (Brown and Olmstead, forthcoming). Ontario's maximum wholesale market price is set at $2000/MWh.

One consequence of such intervention is that it can create a "missing money problem" for generators. As one electricity market expert noted, "The missing money problem arises when occasional market price increases are limited by administrative actions such as price caps. By preventing prices from reaching high levels during times of relative scarcity, these administrative actions reduce the payments that could be applied towards the fixed operating costs of existing generation plants and the investment costs of new plants" (Hogan, 2005, pg.1). By limiting the opportunities for generators to recover fixed costs, price caps can act as a disincentive for generators to invest in new capacity.

A second risk for generators is that if markets develop excess generation capacity, wholesale prices will be pushed down towards variable costs, preventing generators from recovering fixed investment costs, which can be large given the capital-intensive nature of electricity production (Borenstein, 2002). Anticipating that future market conditions could change, generators may be unwilling to invest in new capacity—even if current levels are not fully sufficient to meet demand—when costs can only be recouped through wholesale market revenues. Such risks are magnified in institutional environments where government entities can rapidly implement sweeping regulation or policy changes, as in parliamentary systems with majority party control.

For these and other reasons, wholesale electricity market prices often do not send accurate signals to producers or consumers regarding efficient production and consumption behaviour, nor need they create the competitive incentives for generators to make sufficient long term investments in capacity for reliable supply within a jurisdiction, especially in generation technologies that have high average costs relative to variable costs (e.g. renewable fuels) or that have very long payback periods (e.g. nuclear power). This means that governments, even in deregulated markets, often rely on complementary policy mechanisms to enable generators to recover their fixed costs of electricity generation and to remain in the market. Long-run power purchase contracting, which effectively mimics average cost pricing, has been a common approach in many jurisdictions, as have been separate capacity markets (Biggar and Hesamzadeh, 2014). Invariably, however, additional policy instruments do not operate independently but have spillover effects on generator incentives, introducing further complexities and distortions in the operation of wholesale markets.

ONTARIO'S GENERATION SECTOR AND WHOLESALE MARKET

Background

Over the last half century, several structural shifts have fundamentally changed the nature and cost profile of Ontario's electricity generation sector. Major nuclear generating capacity was brought online during the 1960s to 1980s, transforming baseload generation in the province. Construction costs proved to be significantly greater than expected, however, leading to rate increases of more than 30% in the early 1990s, shortly followed by a rate-freeze imposed by a new (NDP) government in 1993 (Trebilcock and Hrab, 2005).[1]

The second structural change occurred in the late 1990s and early 2000s when the province, in concert with many other jurisdictions that were seeking greater electricity sector efficiencies, experimented with market deregulation and restructuring. In May 2002, the Progressive Conservative government launched a competitive wholesale

[1] The rate freeze remained in place until the Government launched the competitive retail market in 2002.

electricity market and a short-lived competitive retail market. Hot summer temperatures combined with a shortage of generation capacity triggered wholesale price spikes and rapid increases in consumer bills (Trebilcock and Hrab, 2005, pg. 126). Yielding to public pressure to reduce 'rate shock', the government quickly reversed course, closing the retail market in November 2002, implementing a rate freeze, and shelving plans for privatization and restructuring of state-owned generation assets. The government retained the wholesale market with the expectation that it would encourage private investment in new generation capacity.

The third structural shift began in the mid-2000s under a newly-elected Liberal government that sought to rebuild the supply portfolio to address a generation shortfall, and also to rebalance the supply mix, notably by reducing the share of coal generation while phasing in renewable sources such as wind and solar.[2] Since the private sector was reluctant to invest in merchant generation assets, the government created the Ontario Power Authority (OPA) in 2004 to enter into long-term power purchase contracts with generators, operating under the direction of the Minister of Energy. To expedite the government's policies and to avoid repeating the 2002 summer-time supply shortages, the government implemented a series of long-term contracting programs for specific types of generation technologies, including through competitive procurements, standard offer or feed-in tariff programs, and bilateral negotiations with private generators. Under each of these mechanisms the government guaranteed to buy power at a fixed unit rate over a specified time period, commonly 20 years.[3]

Since 2005, the OPA (now the IESO) has contracted for approximately 6,000 MW of wind capacity and more than 2,600 MW of solar capacity (IESO, 2016a). In total, the IESO has contracted for more than 27,000MW of energy. Ontario Power Generation (OPG) controls significant additional nuclear and hydroelectric capacity whose rates are regulated by the Ontario Energy Board.

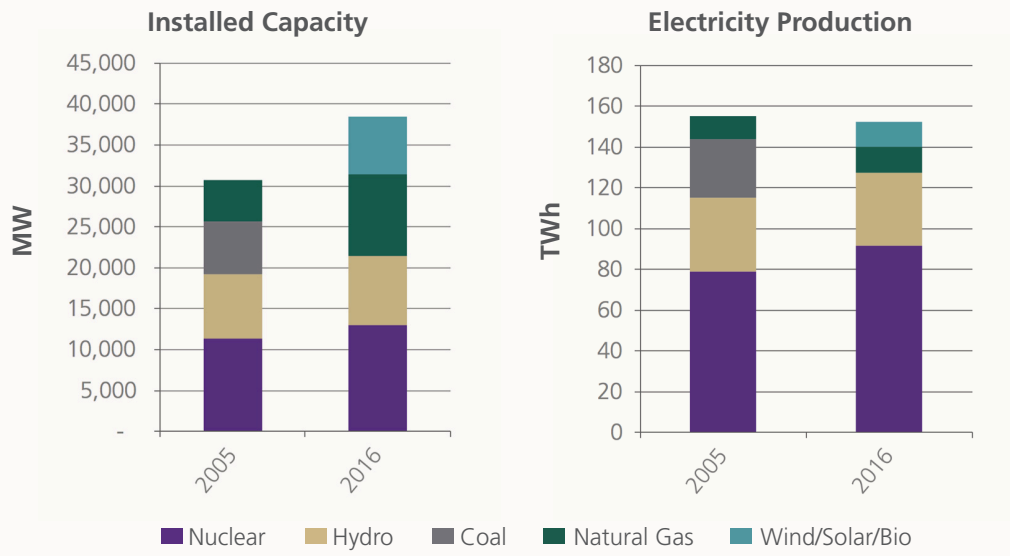
Figure 1 shows how the province's generation profile, including both contracted and regulated components, has changed over the eleven year period since 2005. Overall, the province expanded its installed generation capacity by a net 8,000 MW, increasing to a total of approximately 38,500 MW in 2016. Nuclear power has remained the single largest component, accounting for 11,400 MW in 2005 (37% of total capacity), increasing to 13,000 MW in 2016 (34%). Hydroelectricity was the second largest component in 2005 at 7,900 MW (26%), and has increased marginally to 8,500 MW in 2016 (22%). The most significant changes have been in renewable and natural gas generation. Wind, solar and bio-energy power sources added 7,100 MW over the eleven year period, and accounted for 18% of total installed capacity in Ontario in 2016. Natural gas installed capacity doubled between 2005 and 2016 (adding approximately 5,000 MW), increasing its share from 16% to 26%. Coal, which accounted for 21% of capacity in 2005, was eliminated from the supply mix by April 2014.

In terms of electricity production, overall power output in the province decreased marginally from 155 TWh in 2005 to 152 TWh in 2016. Nuclear accounted for the majority of output (92 TWh, 60% of overall output in 2016), and has increased both the absolute amount and its share of output since 2005. Hydroelectric power generation has remained steady at 36 TWh, and is the second largest component of overall output (23% in 2005 and 2016). Wind, solar and bio-energy accounted for approximately 8% of power output in 2016 (12 TWh). Natural gas output increased marginally between 2005 and 2016, despite the doubling of capacity, and accounted for about 8% of total output in 2016.

[2] Electricity Conservation and Supply Task Force, Final Report to the Minister, January 2004

[3] Contracts for natural gas generation were more complex and included clauses for fixed monthly payments.

Figure 1: Installed Capacity and Electricity Production by Fuel Type, 2005 and 2016



Source: IESO Supply Mix data and Ontario Power Authority 2005 Supply Mix Advice.

Investment in new generation capacity since 2005 has been supported in large part by long-term contracts with private generators that specify a fixed purchase price for energy produced (e.g. $135/MWh for wind power under the FIT program), though they are structured as 'contracts for differences', which provide two related components of revenue for the generators. The first component consists of the prevailing wholesale market price for power, referred to as the 'Hourly Ontario Energy Price' (HOEP). Since wholesale prices may be less than the contracted rate, the second component is the difference between the agreed contract rate and the wholesale price, and is included in the 'Global Adjustment' generation charge. The Global Adjustment consists of the costs of payments to contracted generators, as well as the costs of conservation expenditures, and payments to regulated generators. It exists because, in general, market-based revenues are insufficient to cover the full costs of contracted or regulated generation. The combination of the Global Adjustment and the Hourly Ontario Energy Price effectively represents average cost pricing, enabling generators to recover their variable and fixed costs.

Wholesale Electricity Market

Ontario's wholesale electricity market operates as a mechanism for dispatching generation units in order to ensure a reliable and continuous supply of electricity. The wholesale market price—the HOEP—is determined by offers submitted in advance by generators that specify the amount of power they are willing to provide and the offer price. The HOEP is the hourly average of twelve five-minute market-clearing prices that balance supply and demand. The five-minute market-clearing price, and ultimately the HOEP, is based on the offer of the marginal generating unit, and all dispatched generators, regardless of their offer, receive market revenues at the market-clearing price. Generators that submit offers greater than the five-minute market-clearing price are not dispatched and do not receive wholesale market revenues.

Since 2005 there has been a declining trend in the hourly energy price on the wholesale market, as illustrated by

Figure 2. Contributing factors include falling natural gas prices, lower demand for electricity within the economy, and expansion of generation capacity with low to zero marginal costs such as wind, solar and hydro. In the eight year period 2009 to 2016, the hourly energy price averaged $28/MWh, significantly below the average total cost of virtually any type of generation technology. Such wholesale prices are insufficient by themselves to incent investment in new dispatchable generation capacity, for instance natural gas, which is needed to complement the growth of intermittent renewable generation.

The decline in Ontario's wholesale market price does not necessarily imply that the average cost of generation has also declined, nor is the wholesale price necessarily an indicator of the average generation cost at any point in time. Two explanations are germane: first, in generation markets with excess capacity, such as in Ontario, wholesale prices are largely determined by variable or marginal production costs, not by average costs which additionally reflect fixed capital costs. A significant presence of renewable resources, which have low variable costs, further drives a wedge between wholesale prices and average costs.

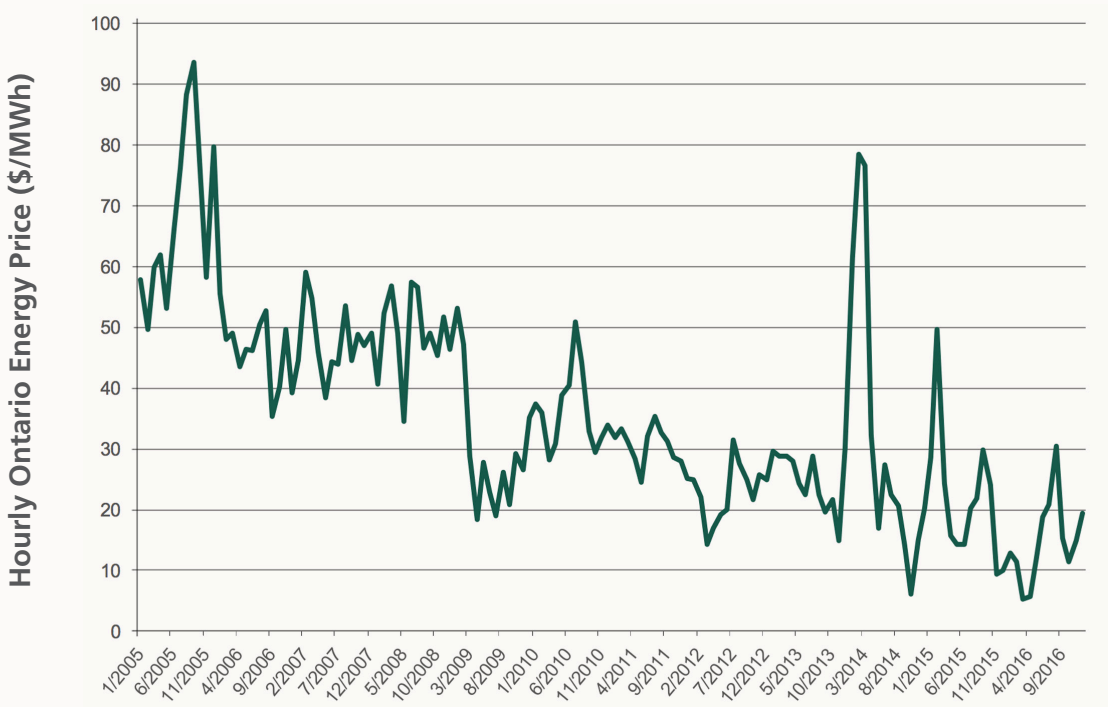
Second, strategic behaviour by generators can distort wholesale prices below even their marginal costs of production. For instance, before September 2013, renewable generators such as wind and solar were at times submitting offers to the market at prices equal to -$2000 per MWh. Notionally, an offer of -$2000 per MWh suggests that wind generators are willing to pay the operator $2000 per MWh dispatched, an unlikely proposition. In reality, wind generators knew that they were guaranteed to receive their contracted, fixed power purchase rate per MWh and wanted to ensure their power gained a favourable position in the merit order and was dispatched. Due to such strategic bidding behaviour by generators, between 2009 and 2014, the HOEP was negative for almost 2000 hours (equivalent to 83 days).[4] In response, in late 2013 the IESO established floor prices for transmission-connected wind and solar generation offers at -$10 per MWh for the first 90% of capacity (subsequently increased to -$3 per MWh) and -$15/MWh for the remaining 10% (Navigant, 2014b). Similarly, manoeuvrable nuclear generators have an offer floor of -$5 per MWh to limit strategic bidding. These examples illustrate that generators are not necessarily offering their production cost, but instead are adjusting their offers in accordance with the terms of their fixed price contracts.[5]

In this sense, generators' long-term purchase contracts can distort the wholesale market price since they reduce the incentives for generators to make offers in the wholesale market based on their cost of production. While the wholesale market price does not provide a perfect economic signal to producers and consumers, this does not imply that the wholesale market dispatch mechanism operates inefficiently over the short-term. Provided that the dispatch merit order is maintained, the five-minute market-clearing price still sends a reasonably accurate signal for short-term dispatch, and generally ensures that lower cost sources of electricity are dispatched before higher cost sources.

[4] Annual Report of the Office of the Auditor General of Ontario, 2015, page 216.

[5] In a slightly different context, Harvey (2013, pages 1-2) states that the hourly Ontario energy price "does not reflect the actual cost of meeting load … and therefore does not send an accurate signal for longer term decisions, such as the entry or exit of generation or of particular types of generation, for increases or decreases in power consumption, or for generators and dispatchable loads." Moreover, no entity in the province purchases electricity via the wholesale market (Alpin, 2017).

Figure 2: Hourly Ontario Energy Price



Source: IESO

THE COST OF GENERATION IN ONTARIO

The cost of contracted generation, which accounts for the majority of capacity in the province, is approximated by the sum of the wholesale market hourly spot price and the Global Adjustment amount, which acts as a full cost recovery mechanism (MacDougall, 2012).[6]

The formal description of the Global Adjustment is outlined in Ontario Regulation 429/04.[7] Officially, it is a payment variance that reconciles the difference between the earned revenues in the wholesale market and the rates established via contract. The relationship between the hourly Ontario energy price and the Global Adjustment may be characterized as a seesaw. When the hourly Ontario energy price goes up, the Global Adjustment goes down; and when the hourly Ontario energy price decreases, the Global Adjustment increases. This relationship is automatic and mechanical. Importantly, this seesaw relationship implies that neither the wholesale price nor the Global Adjustment by themselves provide an accurate 'market signal' to consumers or generators. Further, it is incorrect to interpret the Global Adjustment as an overpayment or 'above-market' payment for generation, as some commentators have claimed, since the wholesale price is not a true market price as would be observed in

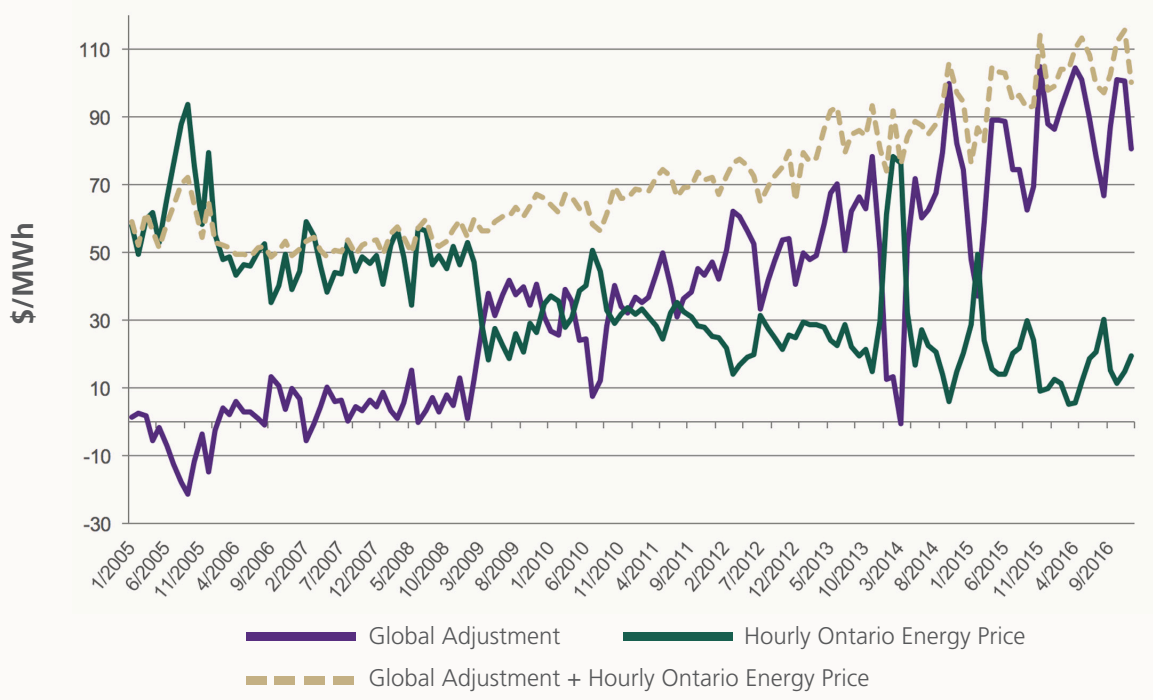
[6] Non-contracted generation includes Ontario Power Generation's nuclear and hydro electricity assets which have rates established through cost-of-service regulation.

[7] Section 1(1) of 429/04 precisely presents the calculation of the Global Adjustment.

normal competitive markets. The appropriate counterfactual for Ontario prices is less obvious than it might seem at first inspection and needs to be formulated as the inclusive price that covers both variable and fixed costs in the absence of policy intervention.

Figure 3 illustrates the hourly Ontario energy price and the unit Global Adjustment amount from 2005 to 2016. The hourly Ontario energy price is calculated as an hourly average of 5-minute dispatch prices, which are determined in the real-time market. The Global Adjustment is calculated monthly, and is based technically on the difference between the hourly Ontario energy price and (i) IESO's contracts with generators, (ii) contracted rates administered by the Ontario Electricity Financial Corporation, and (iii) OPG's regulated nuclear and hydro generation rates (IESO, 2016b). The seesaw or inverse relationship between the Global Adjustment and hourly wholesale energy price is immediately obvious in the Figure.[8] While the hourly price has steadily declined since 2005, albeit with natural monthly variation, the Global Adjustment has increased over the same period, mirroring monthly movements in the hourly price.

Figure 3: Hourly Ontario Energy Price and Global Adjustment, 2005–2016

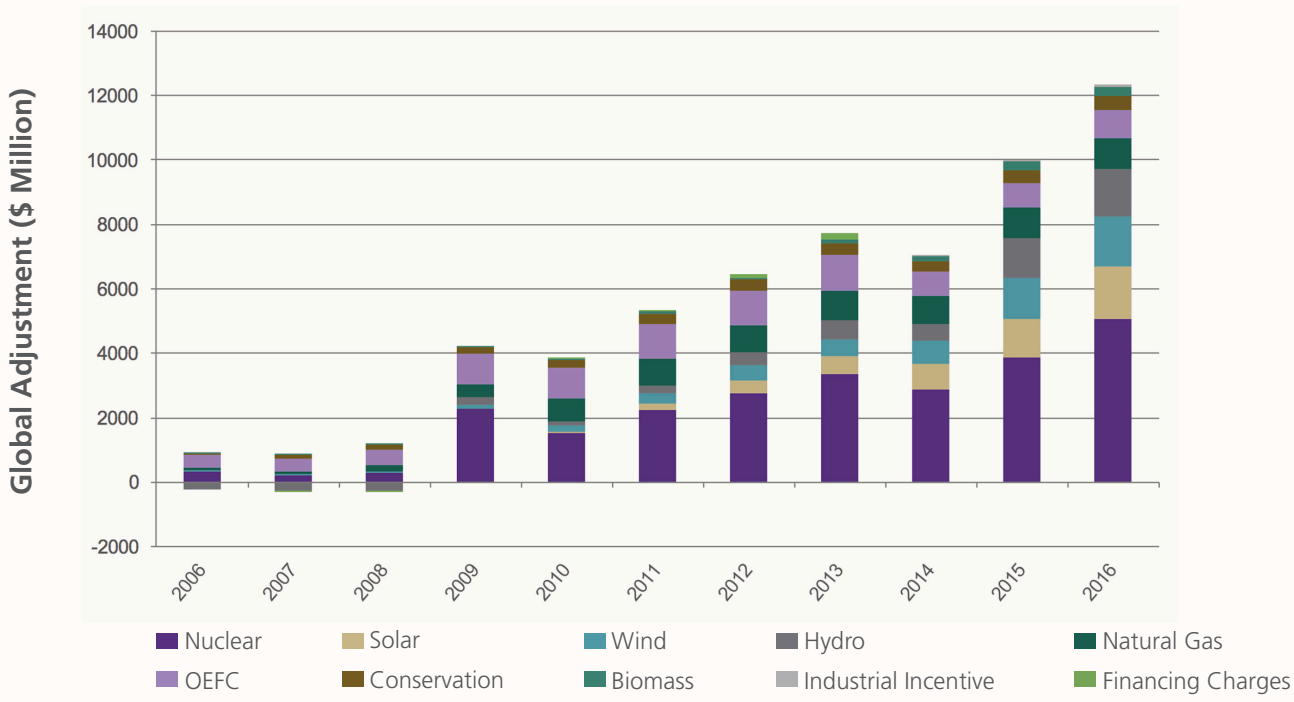


Source: IESO

[8] The relationship is not a perfect one-for-one because the Global Adjustment is a true payment variance and hence includes the costs of conservation programs and financing charges. Also because the Global Adjustment shows up in customers' biannual rate plans, the Global Adjustment, in conjunction with the hourly Ontario energy price, induces a small demand response.

Decomposing the Global Adjustment into its components provides some insight into the share of costs attributable to different generation fuels as shown in Figure 4. It does not provide an accurate picture of total generation costs by fuel type since it does not include costs recovered through wholesale market revenues, though these were a minor share in 2016. The overall Global Adjustment was $12.3 billion in 2016. Nuclear accounted for the single largest share of Global Adjustment costs at 41%. Solar and wind power each accounted for 13%, hydroelectric power for 12%, and natural gas for 8%. Other components summed to 13%.

Figure 4: Global Adjustment by Component, 2006–2016



Source: IESO

REASONS FOR GENERATION COST INCREASES

Rates paid for electricity in Ontario have increased despite a steadily decreasing wholesale market electricity price due to corresponding increases in the Global Adjustment as previously described. While a formal analysis of the sources of these rate increases is beyond the scope of this report, it is valuable to briefly review some of the underlying reasons for the increase in generation costs.

The average unit cost of generation (per MWh) is represented by the dashed line in Figure 3, the sum of the hourly wholesale price and Global Adjustment. From 2006 until 2009, the average cost was relatively stable, remaining between $50 and $60/MWh. Since 2009 there has been a continuous upward trend in the average cost of generation, reaching more than $110/MWh by late 2016. Several factors have contributed to this trend:

Phase out of low cost coal-fired generation. Between 2005 and 2014 Ontario gradually phased out all coal-fired plants, which provided 25% of power generation in the province at a relatively low unit cost (approximately $48/MWh). The coal fleet was reaching the end of its productive life, and new capital investment required to replace it would have increased system-wide costs of generation, and hence rates, regardless of the replacement type of generation fuel. For example, the refurbishment of Bruce Power nuclear units, which provide base load power, yields power at a contracted rate of $66/MWh. Offsetting higher costs, however, are health and environmental benefits from switching from coal to less emission-intensive fuel sources.

Increasing share of renewable fuels. The 2009 *Green Energy and Green Economy Act*, and initiatives such as the Renewable Energy Standard Offer program launched in 2006, have led to the development of a significant amount of wind, solar, hydroelectric, and bio-energy capacity, supported by fixed feed-in tariffs guaranteed for 20 years. Between 2005 and 2016, the province added approximately 7,100 MW of new wind, solar and bio-energy capacity, accounting for 18% of installed capacity in 2016. The rates paid for renewable power are greater than rates paid for nuclear and hydroelectric power which provide the bulk of electricity for the province, for instance ranging from $135/MWh for on-shore wind to $443/MWh for ground-mounted solar PV under the 2012 FIT pricing schedule. Power purchase prices for new solar capacity have since declined as technology costs have fallen steeply, but remain above levelized unit costs for natural gas and nuclear power. In addition to higher direct costs, the expansion of renewable generation capacity has required complementary investment in transmission and distribution sector upgrading, an indirect cost implication for the electricity system.

The Ontario Energy Board provides annual estimates of average generation costs by fuel type based on total payments to generators operating under all contract and regulation mechanisms. The OEB's 2016-17 estimates illustrate the higher average cost of wind, solar and bio-energy relative to nuclear and hydro (see Table 1). It is notable that the average cost of natural gas power is greater than wind and bio-energy power, despite low wholesale gas prices, which may be account for the low capacity utilization of natural gas generation assets.

Table 1: Average Costs of Generation per MWh by Fuel Type

Generation Fuel	Average Unit Cost ($/MWh)
Nuclear	66
Hydro	58
Natural Gas	173
Wind	140
Solar	480
Bio-Energy	131

Source: Ontario Energy Board Regulated Price Plan Report, November 2016 to October 2017. Hydro excludes NUGs and OPG non-prescribed generation. Gas includes Lennox, NUGs and OPG bio-energy facilities.

Overall growth in installed generation capacity. Expansion of the province's generation portfolio began in the early 2000s when the economy was growing robustly and when there were heightened concerns about supply outages, especially following the major regional blackout in Ontario and the north east U.S. in August 2003. In addition, given the shift towards renewable power generation, which is intermittent, the province needed to invest in complementary natural gas or other dispatchable capacity that could operate during periods when renewable power was not available. Ontario added 5,000 MW of natural gas capacity between 2005 and 2016, much of which provides peak and mid-peak power, to bolster system reliability and to satisfy regional needs. The overall amount of installed capacity in the province has increased significantly over the last decade. In 2016, installed capacity was approximately 38,500 MW – a 25% increase from 30,500 MW in 2005. While capacity has grown, however, overall annual domestic demand for grid power has declined, due to a combination of pricing

effects, weaker economic growth, enhanced conservation efforts, and expansion of distributed energy resources. According to IESO data, grid demand declined by 10% from 2006 to 2015, reflecting, in part, the impact of the 2008 Great Recession. Annual peak grid demand has also fallen sharply, from an all time high of 27,000 MW in August 2006 to 22,500 MW in 2015. While long-term forecasting of electricity demand is notoriously difficult, the province has invested in new generation capacity that has proved to be in excess of typical needs, contributing to higher system-wide costs and consumer bills.

SMOOTHING CONTRACTED GENERATION COSTS

The rapid pace of contracting for new generation capacity since 2005 has contributed to a corresponding escalation in consumers' electricity bills. Over the last decade, regulated electricity rates for residential consumers have almost doubled, creating a degree of 'rate shock' and leading to calls for generation market reform. While the government has taken some heat for rising bills, there is a potential policy solution that is economically rational and relatively simple to implement. The government could smooth the costs of contracted generation capacity—which account for more than half of electricity system costs—over a longer period of time than is currently planned, reducing consumer bills in the short to medium term in return for slightly higher bills in the long term. This is akin to household mortgage refinancing that lowers monthly payments by extending the term.

The economic rationale for such a smoothing policy is that the useful productive lives of contracted generation assets—payments for which constitute the bulk of Global Adjustment charges—are in many cases longer than the durations of the contracts. For instance, wind power RESOP, FIT and LRP contracts are structured for 20 years, even though wind turbines and equipment may be expected to operate for 30 years or longer, assuming periodic maintenance and refurbishment is undertaken. Similarly, natural gas generation contracts are generally for 20 year periods, though in the U.S. gas plants have often been retired after 40 years. Besides wind and natural gas, there may be additional generating assets that present opportunities to smooth costs for consumers. Under 20 year contracts, generator capital costs are amortized too quickly relative to the useful life, leading to higher annual capital charges than would be the case if the amortization period was extended to the full expected life span.[9] Charges to consumers for contracted generation could hence be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged on consumer bills would more closely reflect the true economic costs of the assets.[10]

There are three possible methods to accomplish generation cost smoothing in Ontario, recognizing that many new contracts with generators have already been signed over the preceding 12 years.

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[9] Generators have strong incentives to fully amortize fixed capital costs over the duration of the contract, and to build these costs into competitive supply bids, even if the contract duration is shorter than the expected lifespan of the asset. Once a generation facility is constructed it becomes a physically sunk asset, leaving the generator with considerably reduced bargaining power at the end of contract. Even if the government wishes the generator to continue operating after the end of the contract, it may offer to purchase power only at the variable or operating cost of production, providing minimal opportunity for the generator to recoup sunk fixed capital costs. As long as the purchase price at least covers variable costs, it is rational for the generator to accept the government's terms and to operate.

[10] The same smoothing principle could be applied to other generating assets where contract durations are less than expected asset lifespans. It is also applicable for expenditures on conservation projects, which can involve upfront investments in capital assets that reduce electricity demand over multiple years. For instance, high efficiency industrial refrigeration compressors are expected to operate for more than a decade. Currently, conservation expenditures are fully recouped in Global Adjustment charges in the year in which they occur. The Ministry of Energy estimates that smoothing conservation expenditures over asset lifespans could reduce electricity system costs in the short term by $300-$500 million.

1. Option for existing generators to bid for new long-term contracts

First, the government could offer generators with existing contracts the opportunity to bid for new contracts that would supersede their current contracts, stipulating that (a) the time horizon for a new contract must extend beyond the current one, and (b) the new purchase price for electricity for the duration of the new contract must be lower than the current contracted rate. If the generator and government reach agreement on new terms the new contract would replace the original one. Otherwise, the original contract would remain in force.

From the generator's perspective, this provides an opportunity to lengthen the time horizon of financial returns on their investment, and to increase the extant expected net present value of the project. It also pre-empts a potentially challenging renegotiation with the government at the end of the original contract when the assets still have productive capabilities but have been fully amortized. From the government's perspective, generation costs would be smoothed over a longer period of time as determined by individual generators on a case-by-case basis, lowering average electricity bills in the short to medium term.

There are several caveats with this approach. First, substantial rate reductions will be achieved only if there is sufficient competitive bidding pressure between generators for contract extensions. Since future demand for electricity in the province may well decrease, the government need not extend all generator contracts, which could create some implicit bidding competition – but the likely degree of competition and downward pressure on rates is uncertain ex ante. Second, the process of negotiating contract extensions could be administratively complex and time consuming for both the government and generators. The government has contracted with thousands of private entities since 2005. Generators would also likely need to renegotiate their own contractual arrangements with a range of parties in addition to the government, including landowners, financiers, local communities, and Aboriginal groups, a complex and uncertain exercise. A third caveat is that providing new long-term contracts to generators could impact the proposed introduction of a capacity market in Ontario if generators became less willing to participate in capacity auctions.

2. Short-term government subsidization of payments to generators

An alternative and potentially simpler approach for smoothing the amortization of generation costs is for the government to subsidize, in the short to medium term, a portion of annual contracted payments to generators operating under existing contractual terms, and to reduce consumer bills by the corresponding amount. The subsidy each year would equal the difference in annual amortization currently charged (based on the contract duration) and the annual amortization amount calculated using the productive life of the asset. Interest rates on government debt (which would fund the short-term subsidy) are currently very low (2.4% on Ontario's recent 10-year bond issue), making this a relatively cost-effective strategy, though it would increase public sector debt. Generator contracts would be unchanged in this scenario. An advantage of this approach is that it avoids the administrative cost and uncertainty of renegotiating in a short time period multiple contracts on an individual basis with generators, and it can be implemented relatively rapidly. On the other hand, the government would ultimately still need to negotiate new contracts with generators when existing ones expire in the future, in order to ensure that generation assets continue to operate, where needed, beyond 20 years.

In both approaches, the quid pro quo is that consumers would pay more for electricity in the future to reflect the longer amortization period, specifically during the years beyond the end of the original contract and up to the useful life of the generation assets. Generator refurbishment and maintenance costs may also increase for older assets, implying upward pressure on rates when generator lives are extended beyond anticipated contract end dates.

3. Long-term contracting policy

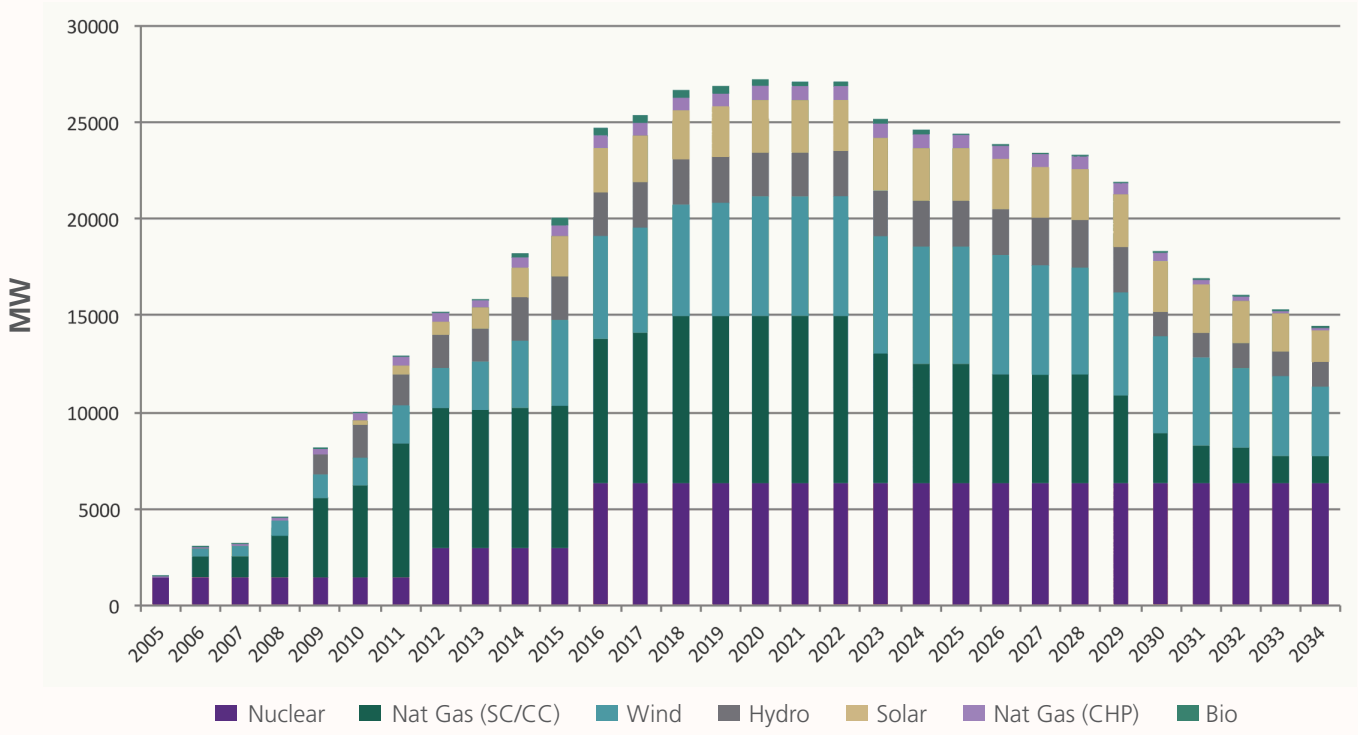
In future contracting exercises for new generation capacity, the government could invite generators to submit bids that include the proposed contract duration, and evaluate such bids on the basis of contract duration as well as on purchase price and other factors. Providing flexibility on duration would encourage generators to match the contract period to the expected productive life of the asset, resulting in (lower) annual amortization costs that reflect the true economic cost.

Preliminary Estimate of Impact of Smoothing Contracted Generation Costs

Estimating the potential impact on electricity bills from stretching out generation asset amortization periods requires detailed information on the terms of generator contracts, which are not publicly available. Assumptions based on available Ontario Energy Board (OEB) and IESO data, however, can lead to approximate calculations, albeit with circumscribed confidence in their accuracy.

Since 2004 the Ontario government has contracted for a significant amount of new generation capacity through competitive procurement exercises, bilateral negotiations, and feed-in tariff programs. By 2006, approximately 3,000MW of newly contracted capacity was operating; by the end of 2016, almost 25,000MW of contracted nuclear, natural gas, hydro, wind, solar, and bio-energy capacity was in place, representing a dramatic increase in procurement over a 10-year period. New procurement is expected to slow down in the coming years, reaching a peak of 27,000 MW accumulated contract capacity in 2020.

Figure 5: Contracted Generation Capacity by Fuel Type, 2005–2034

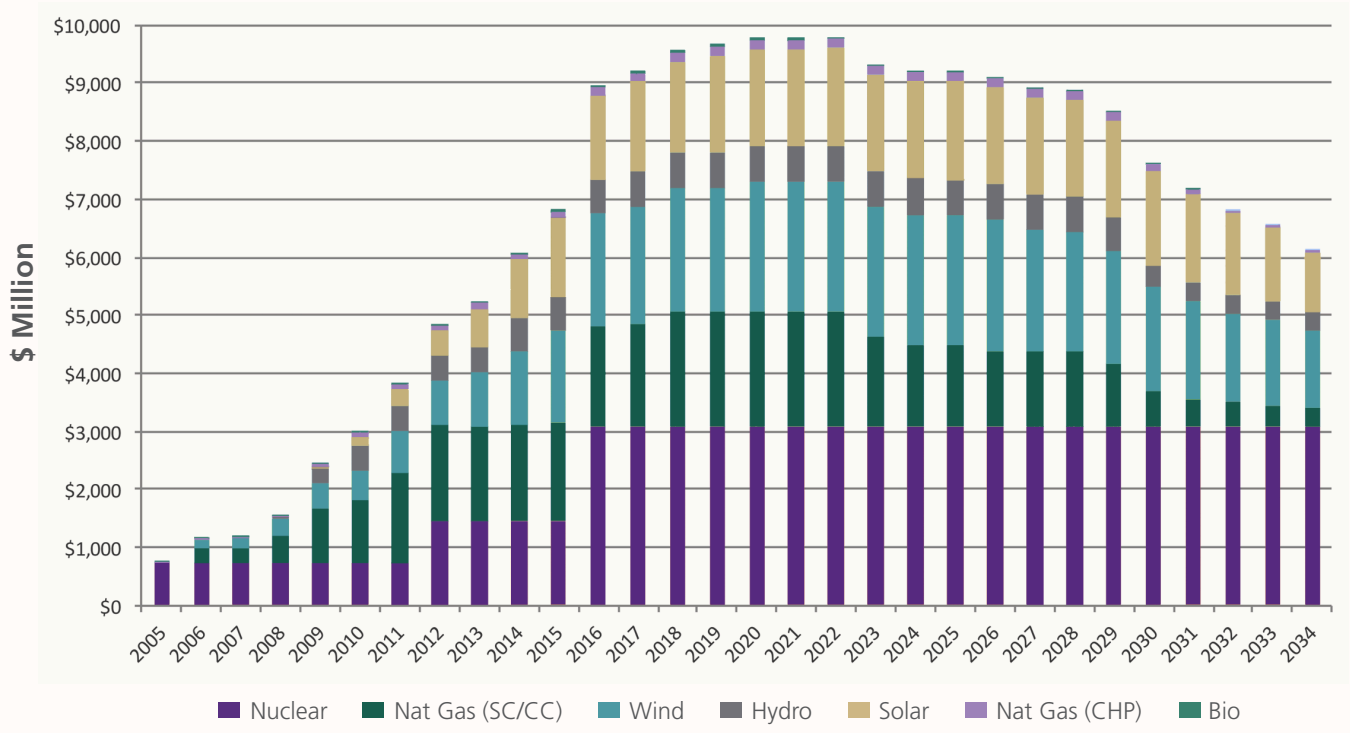


Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016. 'Other' fuel category omitted for simplicity.

Figure 5 shows the amount of accumulated contracted capacity for each fuel type for the 30-year period from 2005 to 2034. There has been a significant increase in contracted natural gas generation (representing 33% of total contracted capacity in 2017), as well as in nuclear (25%) and wind (22%). Solar, hydro, bio-energy and other fuels account for the remaining 20% of the 2017 total. OEB data on the average unit cost of electricity by fuel type, and IESO data on capacity utilization, leads to approximate estimates of the annual cost of contracted generation capacity.[11] In 2016, payments to contracted generators are estimated to have totalled approximately $9 billion. The estimated costs of contracted generation by fuel type are shown in Figure 6.

An important feature of Figures 5 and 6 is that they chart the contractual duration of capacity, not the useful productive lifespan of the generating assets. According to the IESO, contract terms vary from 5 to 21 years for bio-energy to 31 to 57 years for nuclear units. For natural gas and wind generation, as well as solar, contract periods appear to be somewhat shorter than typical estimates of expected lifespans (see Table 2), though lifespan estimates depend on a multitude of factors such as the specific technology type within a broad category, capacity utilization, and climate conditions. Some caution must thus be used in applying average industry lifespans to the specific case of generators in Ontario.

Figure 6: Estimated Cost of Contracted Generation, 2005–2034



Source: Author estimates. 'Other' fuel category omitted.

[11] Average effective power purchase rates per MWh for each fuel type are assumed to be as calculated in the OEB's Regulated Price Plan Report, November 2016. Rates range from $58/MWh for hydroelectric generation to $480 for solar. The same rates are applied each year in the analysis, though it is expected there will be variation in practice due to the changing mix of generation contracts with different purchase terms. Capacity utilization is estimated based on IESO reported installed capacity availability and actual power production for each fuel type in 2016 (http://www.ieso.ca/Pages/Power-Data/Supply.aspx)

Table 2: Durations of Generator Contracts and Expected Asset Lifespans[12]

	IESO contract duration (range)	IESO contract duration (mid point)	IEA lifespan estimate[13]	EIA lifespan estimate[14]
Natural Gas	10–20 years	15 years	30 years	30 years
Wind	20	20	25	30
Nuclear	31–57	44	60	
Hydro	20–50	35	80	
Solar	20	20	25	30

Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016.

Nonetheless, estimates of the impact of smoothing generation costs on consumer bills can be calculated under hypothetical scenarios where generator lifespans are assumed to extend to 30 years for natural gas plants and wind farms, and 25 years for solar PV (existing contracts are assumed to all be for 20 years). We do not model contract extensions for nuclear power given the specific nature of CANDU technology, or for hydroelectricity, bio-energy or CHP which are a relatively small share of total contracted capacity costs.

By the end of 2017, contracts for natural gas generation will be an estimated 8 years old on average, implying that 40% of original capital costs will have been amortized. Amortizing the remaining 60% of capital costs over the next 22 years instead of the originally-planned next 12 years suggests a reduction of up to 45% in annual natural gas generator capital charges may be possible in 2018. For wind power contracts, which will be on average 5 years old in 2017, the equivalent potential reduction in annual capital charges is up to 40% in 2018, and for solar 25%.[15]

In 2018, the total value of reductions in natural gas, wind and solar generation capital charges is estimated to be in the range of $1.5–$2.0 billion (see Figure 7), equivalent to approximately 8% of total expected electricity system costs. The amount of the annual reduction declines gradually over time in part due to interest costs on debt for the accumulated subsidy.[16] Additional asset refurbishment expenses in the latter part of the lifespan of generation assets would also reduce the amount of annual savings. After 2030, bills are forecast to be higher for several years than they would have been without smoothing.

[12] Retirement ages of generation plants also indicate lifespans. In the U.S., natural gas plants have often reached more than 40 years before retiring (Powell, N. America's Ageing Generation Fleet. Power magazine, 28 January 2013).

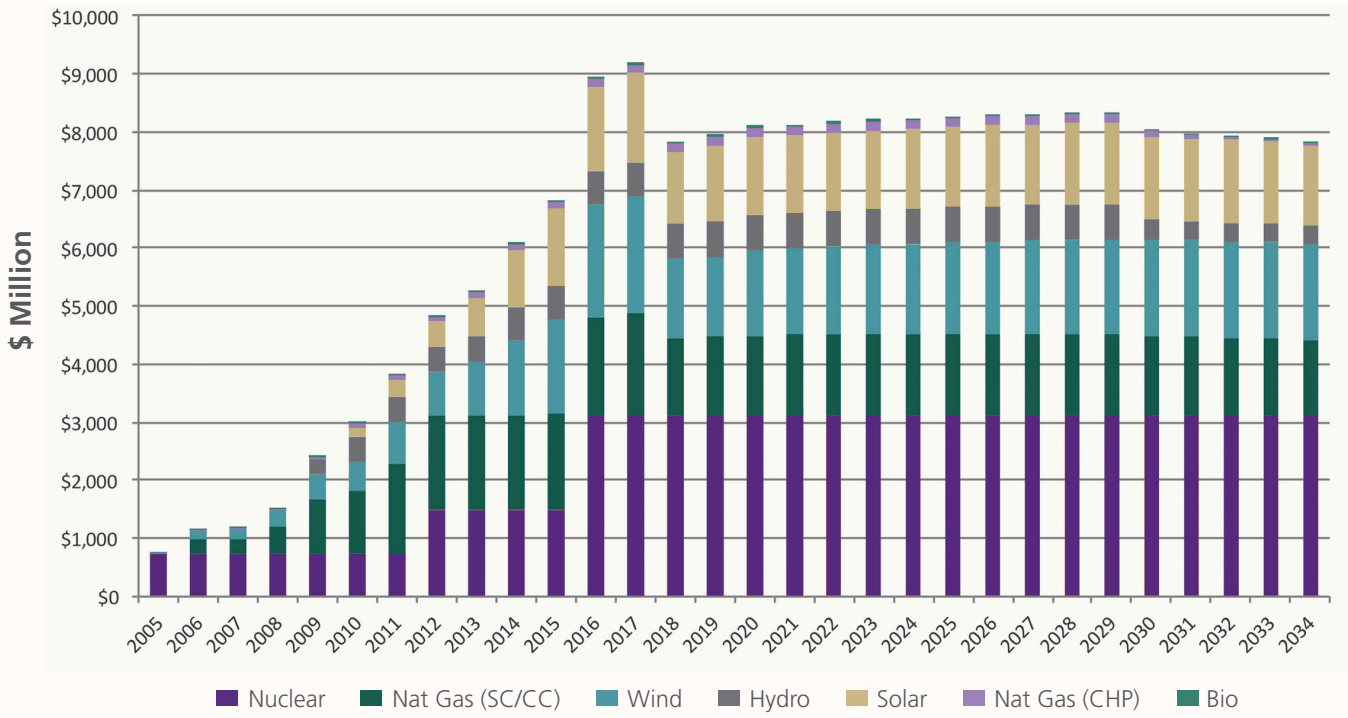
[13] International Energy Agency. 2015. Projected Costs of Generating Electricity.

[14] Energy Information Administration. 2016. Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2016. August 2016.

[15] Smoothing is applied only to the assumed capital component of unit generation costs. For wind and solar power which have zero fuel costs, and relatively low variable operation and maintenance costs, it is assumed that 90% of the power purchase rate is accounted for by capital costs. For natural gas capacity, which is assumed to have an average capacity utilization rate of 15% based on IESO data, and an average effective power purchase rate of $173/MWh (based on OEB estimates), the capital cost share is assumed to be 70%. Lower capital cost percentages would reduce the impact on current consumer bills of a smoothing policy.

[16] The interest rate on long-term debt is assumed to be 2.4%, which is the most recent rate on 10-year Ontario government bonds. Annual interest charges on the accumulated debt are assumed to be paid in full in each year by ratepayers through inclusion in electricity bills.

Figure 7: Estimated Smoothed Cost of Contracted Generation, 2018-2034



Source: Author estimates. 'Other' fuel category omitted.

These estimates are preliminary and reflect the specific assumptions of the model. Alternative assumptions would naturally lead to larger or smaller reductions in near-term contracted generation costs. They are also calculated for option (2) above in which the government finances the smoothing of contracted generator payments over an extended period, leaving original contracts unchanged. The alternative approach outlined in option (1), where generators bid competitively for new long term contracts that supersede existing ones, may deliver similar savings if all contracted generators participated and agreed to equivalent reductions in power purchase rates.

While smoothing generation costs can ease the transition for current households and firms to a higher cost electricity system, there are risks and limitations associated with such a policy. One risk is that future changes in markets, technologies, government policy, or demand for electricity may reduce the need for longer-lived generation capacity, potentially creating future stranded costs. In addition, an important consequence of smoothing is that it raises questions about inter-generational equity since consumers in the long-term future will contribute towards a larger share of generation capital costs, and consumers will also pay interest costs associated with short-term subsidization of rates. Some commentators have advocated for the status quo, citing the imposition of interest costs on future consumers as inequitable. However, the corollary to this argument is that the current approach of amortizing generation capital costs too quickly relative to expected lifespans is effectively a subsidy by current ratepayers of future consumers, who would have usage of the assets but not have to contribute to their capital costs. In addition, as economic growth continues, future generations will be wealthier than today, making any given level of electricity costs more affordable.

CONCLUSION

Wholesale electricity markets in many jurisdictions exhibit a variety of imperfections that affect investment, production, and consumption decisions. Wholesale market prices for electricity, including in Ontario, often do not provide an accurate representation of the full economic cost of production, which consists of short-run variable costs (e.g. fuel costs) and long-run fixed capital costs. Wholesale prices are often determined instead by short-run variable costs, especially in environments where there is excess generation capacity, implying that additional mechanisms—such as long-term power purchase contracts—are needed to enable generators to recover their full costs.

Since 2006, the hourly market price for electricity in Ontario has steadily fallen, owing to a decrease in demand and the addition of new capacity resources with low short-run variable costs. At the same time, the underlying cost of generation has increased as the province has made investments in new and refurbished capacity to ensure system reliability and to replace coal, and also added wind and solar supply—which are more costly than nuclear, hydro-electric, and coal generated power—in order to achieve environmental goals. The full cost of generation is reflected in the sum of the hourly wholesale market price (HOEP) and Global Adjustment, which enables generators to recover both short-run variable and long-run fixed costs of electricity production. The Global Adjustment is thus an important component of ensuring a well-functioning generation sector.

Despite the rapid escalation in generation costs that Ontario has experienced since 2005, there is an economic rationale for smoothing rates and reducing electricity bills for consumers in the short-run. Amortizing contracted generation capital costs over longer periods to match with the productive lifespans of the assets, which are often longer than the contracted terms, could reduce current electricity system costs by approximately eight percent, a preliminary estimate. Under this approach, the cost of generation charged on consumer bills would more closely reflect the true economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term, raising the challenging issue of inter-generational equity.

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ABOUT THE IVEY ENERGY POLICY AND MANGEMENT CENTRE

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From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Gavin He; Anna Strathy
Subject:	FW: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 5:34:59 PM
Attachments:	Consolidated - OFHP Matrix - Week of April 10.docx Agenda_Weekly Rate Mitig Implmentation Group_Mar 13.docx Letter from Province to OPG.DOCX

From: Katona, Keley (ENERGY) [mailto:Keley.Katona@ontario.ca]
Sent: Wednesday, April 12, 2017 5:33 PM
To: Steen Hume (CAB) ; Kaili Sermat-Harding (ENERGY) ; Michael Reid (ENERGY) ; Carolyn Calwell (MCSS) ; Scott Nelms (ENERGY) ; 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com) ; HARTWICK Ken - FINANCE (ken.hartwick@opg.com) ; Rosemaire Leclair ; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca) ; Campbell, Bruce (bruce.campbell@ieso.ca) ; Kim Marshall (Kim.Marshall@ieso.ca) ; Scott Thompson (CAB) ; Helen Angus (MOHLTC) ; Steven Davidson (MTCS) ; 'Martine Band' ; 'CROZZOLI Carlo -CBUSDEV&STRT' ; Gadi Mayman ; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY) ; Andrew Teliszewsky (ENERGY) ; Matt Whittington (ENERGY) ; Baker, Carys (ENERGY) ; Kyle MacIntyre (MOF) ; David McLean (MOF) ; Robert Foster (MOF) ; jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca' ; Turnevicius, Lorraine ; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Good evening,
Please find attached the material for discussion tomorrow morning.
Thanks,
Keley

Implementation of Ontario's Fair Hydro Plan
Week of April 10, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		

• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation
	• Defining mitigation and recovery mechanism
	• Establishing roles for IESO, OPG and OEB
	• Regulation (amend O.Reg. 95/05)
	• Shareholder Resolution (work with OPG to determine form)
	• Accounting opinions from E&Y (OPG) and KPMG (IESO)
	• Financing:
	  o How long will IESO hold short term liability (weeks/months);
	  o When and how frequently will OPG purchase the asset from IESO;
	  o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc);
	  o OPG to confirm if it is considering more than one SPV/subsidiary;
	  o OPG to explore tax considerations;
	  o OPG to indicate how it would determine interest rate on sub-debt; and
	  o OPG to provide amount/frequency of equity required and indicate trigger
	• Third Party Technical Report (e.g., long lived assets, associated assessment of social, health and environmental benefits)
	
	<u>Recent Action Items</u>
	
	OPG:
	• OPG to continue to work with lead banks / rating agencies / OFA on financing issues
	• OPG to confirm accounting if OFA were to act as lead order on borrowing
	• OPG to determine who will finance / hold the asset until it goes to
		• IESO Board meeting on April 12, 2017 – ESP to present on OFHP
		
		• AG briefing on April 19, 2017 (TBD)
		
		• Provide comfort letter to allow OEB to include in May 2017 RPP
		
		• April 21, 2017, "pens down" on Legislative drafting
		
		• Approval dates:
		  o TB/LRC on May 1 2017; and
		  o Cabinet on May 3, 2017
		
		• Legislation introduced May 4, 2017.
		  o Opposition Briefing (TBD)
		
		• Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	the market • OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder resolution in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member • OPG providing shareholder resolution to OPG Board committee April 7, 2017 and will be provided to Ministry following that **IESO:** • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to discuss LDC issues with OEB **OEB:** • OEB to continue to work with ENERGY to finalize draft comfort letter regarding May 1 – Regulated Price Plan (RPP) and OESP • OEB to draft RPP communique to be released publicly by April 20, 2017 **Legislative Drafting:** • LSB / Blakes / OPG / IESO will continue to work through legislative drafting issues • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature • Working group meetings Monday and Tuesday • ENERGY / Blakes / IESO / OEB / OPG to meet on Monday to work through issues related to legislation • KPMG / E&Y to continue to be informed so that they can eventually confirm we've met all conditions • Blakes / OPG to work through financing issues related to 10% cap	

Item	Key Deliverables / Considerations	Timing / Next Steps
	• Blakes / LSB to work with MAG on a second constitutional law opinion from Peter Hogg • TD engaged through OFA to provide financial advice <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs • SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • LRC package for OESP enhancements (50% increase, expanded eligibility) approved by LRC and Cabinet. o Implementation on May 1 to align with OEB decision to end OESP charge on May 1, and to finance program through variance account. • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • SNAP to work with TBS map out how funds will flow from fiscal plan after legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to transition from OESP variance (approx. $100 million) to finance the program to financing with tax funds. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. • April 7, 2017: Briefing for Advisory Committee members <u>Considerations</u> • Legislative changes not required.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

Item	Key Deliverables / Considerations	Timing / Next Steps
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information. March 31, 2017, information provided to the FAO
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP <u>Recent Action Items</u> • Provide AG technical briefing presentation used in media lock-up on OFHP in advance of the technical briefing	• March 2017: Cabinet submissions provided to AG • April 19, 2017: Preliminary discussion on (TBD)
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment <u>Recent Action Items</u> • MO to clarify bill presentment expectations with PO (Bill inserts will be ready for July 1 with bill redesign to occur in the Fall)	• Initial discussion on March 31, 2017

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 13, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB / Blakes)
    - OPG Update
    - IESO Update
    - OEB Update

2) OPG Letter

3) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

4) Update on Action Items / Policy Matrix

Notes:

DRAFT: April 11, 2017

[Letterhead of Minister of Energy]

April [●], 2017

Bernard Lord
Board Chair
Ontario Power Generation Inc.
700 University Avenue, 19th Floor
Toronto, Ontario
M5G 1X6

Dear Mr. Lord:

I am writing further to the Premier's news release of March 2, 2017, in which the Province announced the Fair Hydro Plan to lower electricity bills by 25 per cent on average for certain customers starting in the summer of 2017, as part of a significant system restructuring that will address long-standing policy challenges and ensure greater fairness. Given OPG's expertise as a participant in the electricity market and its expertise in rate regulated accounting and investment stewardship over significant pension and nuclear funds, I am writing specifically to request OPG's involvement in the implementation of the Global Adjustment Refinancing component of the Fair Hydro Plan

As you will have read, the 25 percent reduction in residential electricity bills referred to in the March 2nd announcement includes the 8 per cent reduction resulting from the rebate of the provincial portion of the harmonized sales tax on electricity bills effective January 1, 2017. The Province has also committed that certain customer bills would not increase by more than the rate of inflation for the four years following the 25 per cent average reduction.

In addition, as you know, Ministry of Energy staff have been working on preparing the draft legislation and regulations to implement the Fair Hydro Plan, with input from the IESO, the OEB, OPG and their respective advisors.

The Province is requesting that OPG, working with the Ministry of Energy, the IESO, the OEB, and their respective advisors, consider and recommend a plan for financing mechanisms that could achieve the Province's objectives for the reduction in consumer bills and the limitation on bill increases outlined above and in the Fair Hydro Plan, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan.

In particular, the Province would like OPG's financing plan to consider, among other things, structures and methods that would permit viable refinancing of a portion of the Global

Adjustment to reduce electricity prices for certain of today's electricity ratepayers, with the costs of the refinancing to be recovered over a period of up to 30 years, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan. We would expect the financing plan to include:

i) potential structures for the financing, which may include, as appropriate, a special purpose vehicle created for the financing;

ii) potential financing mechanisms and instruments, including senior debt and subordinated debt; and

iii) identification of the capital markets and jurisdictions that can be accessed to finance the rate mitigation.

The Province recognizes the need to provide OPG with the necessary assurances with respect to recovery of the principal, interest, and operating and other costs of any financing and will address the specific requirements identified by OPG and its financial advisors, including in the pending legislation and regulations that will govern the mechanics and requirements of the financing entity. We would also request that your plan identify any amendments to OPG's governing legislation and constating documents needed to facilitate the implementation of the financing plan in a commercial manner.

We would further expect that the financing plan would be implemented in an effective and cost-efficient manner by OPG.

I look forward to receiving a detailed plan that has the support of the OPG Board of Directors by June 1, 2017.

Yours truly,

The Honourable Glenn Thibeault
Minister of Energy

From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Gavin He; Anna Strathy
Subject:	FW: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 5:34:59 PM
Attachments:	Consolidated - OFHP Matrix - Week of April 10.docx Agenda_Weekly Rate Mitig Implmentation Group_Mar 13.docx Letter from Province to OPG.DOCX

From: Katona, Keley (ENERGY) [mailto:Keley.Katona@ontario.ca]
Sent: Wednesday, April 12, 2017 5:33 PM
To: Steen Hume (CAB) ; Kaili Sermat-Harding (ENERGY) ; Michael Reid (ENERGY) ; Carolyn Calwell (MCSS) ; Scott Nelms (ENERGY) ; 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com) ; HARTWICK Ken - FINANCE (ken.hartwick@opg.com) ; Rosemaire Leclair ; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca) ; Campbell, Bruce (bruce.campbell@ieso.ca) ; Kim Marshall (Kim.Marshall@ieso.ca) ; Scott Thompson (CAB) ; Helen Angus (MOHLTC) ; Steven Davidson (MTCS) ; 'Martine Band' ; 'CROZZOLI Carlo -CBUSDEV&STRT' ; Gadi Mayman ; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY) ; Andrew Teliszewsky (ENERGY) ; Matt Whittington (ENERGY) ; Baker, Carys (ENERGY) ; Kyle MacIntyre (MOF) ; David McLean (MOF) ; Robert Foster (MOF) ; jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca' ; Turnevicius, Lorraine ; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Good evening,
Please find attached the material for discussion tomorrow morning.
Thanks,
Keley

Implementation of Ontario's Fair Hydro Plan
Week of April 10, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		

• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation
	• Defining mitigation and recovery mechanism
	• Establishing roles for IESO, OPG and OEB
	• Regulation (amend O.Reg. 95/05)
	• Shareholder Resolution (work with OPG to determine form)
	• Accounting opinions from E&Y (OPG) and KPMG (IESO)
	• Financing:
	  o How long will IESO hold short term liability (weeks/months);
	  o When and how frequently will OPG purchase the asset from IESO;
	  o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc);
	  o OPG to confirm if it is considering more than one SPV/subsidiary;
	  o OPG to explore tax considerations;
	  o OPG to indicate how it would determine interest rate on sub-debt; and
	  o OPG to provide amount/frequency of equity required and indicate trigger
	• Third Party Technical Report (e.g., long lived assets, associated assessment of social, health and environmental benefits)
	
	<u>Recent Action Items</u>
	
	OPG:
	• OPG to continue to work with lead banks / rating agencies / OFA on financing issues
	• OPG to confirm accounting if OFA were to act as lead order on borrowing
	• OPG to determine who will finance / hold the asset until it goes to
		• IESO Board meeting on April 12, 2017 – ESP to present on OFHP
		
		• AG briefing on April 19, 2017 (TBD)
		
		• Provide comfort letter to allow OEB to include in May 2017 RPP
		
		• April 21, 2017, "pens down" on Legislative drafting
		
		• Approval dates:
		  o TB/LRC on May 1 2017; and
		  o Cabinet on May 3, 2017
		
		• Legislation introduced May 4, 2017.
		  o Opposition Briefing (TBD)
		
		• Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	the market • OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder resolution in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member • OPG providing shareholder resolution to OPG Board committee April 7, 2017 and will be provided to Ministry following that **IESO:** • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to discuss LDC issues with OEB **OEB:** • OEB to continue to work with ENERGY to finalize draft comfort letter regarding May 1 – Regulated Price Plan (RPP) and OESP • OEB to draft RPP communique to be released publicly by April 20, 2017 **Legislative Drafting:** • LSB / Blakes / OPG / IESO will continue to work through legislative drafting issues • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature • Working group meetings Monday and Tuesday • ENERGY / Blakes / IESO / OEB / OPG to meet on Monday to work through issues related to legislation • KPMG / E&Y to continue to be informed so that they can eventually confirm we've met all conditions • Blakes / OPG to work through financing issues related to 10% cap	

Item	Key Deliverables / Considerations	Timing / Next Steps
	• Blakes / LSB to work with MAG on a second constitutional law opinion from Peter Hogg • TD engaged through OFA to provide financial advice <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs • SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • LRC package for OESP enhancements (50% increase, expanded eligibility) approved by LRC and Cabinet. o Implementation on May 1 to align with OEB decision to end OESP charge on May 1, and to finance program through variance account. • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • SNAP to work with TBS map out how funds will flow from fiscal plan after legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to transition from OESP variance (approx. $100 million) to finance the program to financing with tax funds. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. • April 7, 2017: Briefing for Advisory Committee members <u>Considerations</u> • Legislative changes not required.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
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• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

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11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information. March 31, 2017, information provided to the FAO
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WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 13, 2017

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    - ICI (ESPD)

4) Update on Action Items / Policy Matrix

Notes:

DRAFT: April 11, 2017

[Letterhead of Minister of Energy]

April [●], 2017

Bernard Lord
Board Chair
Ontario Power Generation Inc.
700 University Avenue, 19th Floor
Toronto, Ontario
M5G 1X6

Dear Mr. Lord:

I am writing further to the Premier's news release of March 2, 2017, in which the Province announced the Fair Hydro Plan to lower electricity bills by 25 per cent on average for certain customers starting in the summer of 2017, as part of a significant system restructuring that will address long-standing policy challenges and ensure greater fairness. Given OPG's expertise as a participant in the electricity market and its expertise in rate regulated accounting and investment stewardship over significant pension and nuclear funds, I am writing specifically to request OPG's involvement in the implementation of the Global Adjustment Refinancing component of the Fair Hydro Plan

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In addition, as you know, Ministry of Energy staff have been working on preparing the draft legislation and regulations to implement the Fair Hydro Plan, with input from the IESO, the OEB, OPG and their respective advisors.

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Adjustment to reduce electricity prices for certain of today's electricity ratepayers, with the costs of the refinancing to be recovered over a period of up to 30 years, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan. We would expect the financing plan to include:

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We would further expect that the financing plan would be implemented in an effective and cost-efficient manner by OPG.

I look forward to receiving a detailed plan that has the support of the OPG Board of Directors by June 1, 2017.

Yours truly,

The Honourable Glenn Thibeault
Minister of Energy

From:	Anna Strathy
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Gavin He
Subject:	FW: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Thursday, April 20, 2017 2:22:50 PM
Attachments:	the-economic-cost-of-electricity-generation-in-ontario-april-2017.pdf

Gadi wanted to flag a few items raised at the Rate Mitigation meeting this morning, summarized in Scott's email below. Please see highlighting and my notes in red text.

Anna

From: Gadi Mayman
Sent: Thursday, April 20, 2017 1:40 PM
To: Ronald Kwan ; Ken Kandeepan ; Mike Manning
Cc: Anna Strathy ; Gavin He
Subject: Fw: Rate Mitigation Implementation Meeting - April 20, 2017

From: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca>
Sent: Thursday, April 20, 2017 11:51 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Hi Dave,

Here is my next installment of Thursday OFHP. Note that I have attached a report from IVEY, referenced later in the document.

- AG discussion (Yesterday):
  - ENE Lead, walked through the March technical briefing presentation
  - TBS DM suggested that this was the first of several meetings and considers this to be a high level, first pass
    - Lots of moving pieces where the Province does not yet have clarity
    - Will take back questions and will respond once it has more certainty on structure
  - The AG and staff had the following questions:
    - Legislative precedent of shifting ratebase to tax base, and can the tax base support these additional charges?
    - Why use trust mechanism for Affordability Fund, and should the Trust be consolidated?
    - Seeking more details on the accounting for the OFHP and wanted reports to justify what is set out in the Budget
    - Also seeking independent studies to back up 30 year contracts (ENE referenced Ivey report)?
    - Asking about mechanics of the OPG Trust, OEFC lending etc.?
    - What was used to brief the FAO?
- Legal Update
  - Timing Update
    - Pens down now on the 28th
    - May 9th TB
    - May 10th Cab
    - May 11th introduction
  - Latest large legal discussion took place on Monday

- This was the first run through of legislation draft (up to that point discussions focused on turns of instructions to leg. counsel)

o Current Status
- Turning a new draft today
- Trying to find balance and working through all the wording from various parties (some of which is inconsistent)
- Received very detailed feedback from OPG / Torys and others
- In all-night drafting stages
- Trying to balance stakeholder consultation time and drafting time

o Tension between enabling the transaction in legislation and embedding the transaction in legislation – Gadi noted that the strong preference at the meeting was for the legislation to enable the transaction (while the bankers would prefer to embed the transaction in the legislation).
- Determining how many questions need to be answered now and what can be pushed to regulation / commercial agreements
- Legislation will include indications to regulations, but will not have all filled in
- Difficult because American examples embed transaction in legislation

o At least one more turn of legislation
- If comments quickly, may be able to turn more than once
- Seeking comments by no later than Sunday

o Business Issues
- Guarantees
  - General powers to be enabled in legislation and details will flow in regulations / commercial arrangements
  - MoF / TBS suggests Minister of Finance should have power to provide guarantees under FAA – rather than a guarantee provided by the Minister of Energy, as the legislation currently sets out.
  - First ask from dealers included several elements that would likely not be palatable to the Province
    - For example, a make-whole penalty which creates a very expensive break fee – Gadi stated strong opposition to the make-whole penalty; with support from Ministry of Energy and OPG
  - OPG and OFA to develop a set of proposed guarantees, rather than negotiating with dealers
- OPG requires cash flows immediately (interest payments starting on Day 1)
  - Need to meet this objective while meeting the Province's commitment to reduce rates by 25% and maintain increases at inflation for next 4 years
  - Without these payments there would be an adverse effect on credit metrics, and earnings (fiscal)
  - Response:
    - IESO will pay interest costs to OPG Trust on an ongoing basis, funded through its line of credit, resulting in a larger deferral
    - OPG Trust would then purchase the deferral from IESO (consistent with mechanism already being contemplated)
    - Need to determine accounting impact to IESO, KPMG's preliminary view

is that this will work

- Should Province / OPG be targeting AAA rating and what is the impact of Provincial guarantees?
  - Interaction with required Provincial guarantees
    - Fed example of Muskrat Falls, no make-whole, convert to Canada bonds, still trades 80 bps back from Canada
  - Regardless of rating, will trade back from Ontario
  - S&P tends to focus on back-stop more so than Moody's, DBRS, so may have a split rating
    - S&P more focus for US investors so may not be as relevant if Canadian focus initially
  - AAA rating helps for securitizations and important to aim as high as possible given unique structure (needed in order to attract those investors
  - Important target, but need to avoid setting up potential expense of $100s of millions in break fees

o Approvals for equity injections

- Need to have appropriation approvals in TB sub
- Focus on an annual approvals process, followed by a streamlined monthly flow of funds
- EIGS (me) to work through this with OFA, OPG and TBS and report back

o Con Law issue

- Navigant engaged by ENE and working through an analysis of the underlying life of assets
- Lawyers working on reverse engineering legislation to ensure it is constitutionally sound

- OPG Update
  - Special Board committee yesterday to briefing on status of legislation
  - Formal approval May 5th from Board
  - Accounting letters now working through process (E&Y letterhead, they are in agreement)
  - Credit Rating process
    - Will approach rating agencies post-regulations, with a framework for commercial agreements
    - OPG anticipates ~1 month to receive preliminary view from rating agency
    - And a few additional weeks to finalize
    - Final rating will come once contractual arrangements are in place
  - OPG working with IESO on operations and framework of how the purchase and sale agreement will work
    - Iterative process starting now
    - Will need to move as legislation / regulation develops
- IESO Update
  - Discussions with OFA on enhanced LoC underway
  - Accounting opinion in development
    - Main focus on risk to IESO in event OPG in future does not purchase the asset (need recoverability from ratepayers without taking away from rights of the

Trust); dealers do not want to keep layering on additional charges to ratepayers
- Ok if Province owns separate cash flow, but not so comfortable if IESO then sells to a separate financing entity (worried about prioritization)
- Can the Province backstop without a fiscal hit on the entire transaction structure

- IESO IT Audit
  - May be looking into Market Surveillance Panel functions
  - Meeting Tuesday afternoon with AG on the OFHP (plan to state this is still in process)

- OEB
  - Today the RPP for May will be announced
    - Taking into account all elements of the Fair Hydro Plan that seemed prudent to include
    - OEB seemed to suggest 50% now and remaining 50% dependent on legislation implemented so anticipate a further change to rates on July 1
  - Need more details on OEB's anticipated role in setting up regulatory assets

Social Programs

- RRRP
  - Meeting of LDCs earlier in the week (43 attended)
  - ENE provided update on activities underway
  - Re-enforced need for updates to systems by July 1, and LDCs were receptive
  - Discussed bill presentment and LDCs were comforted that only limited changes needed now, more extensive changes in the fall
- OESP
  - Working through legislative changes in support of this initiative
  - MCSS and ENE working to get to automatic enrollment, and appear to have a path
  - Discussions with CRA underway, received message that this is a priority to remove wet signature requirement
- FN rate
  - ENE sitting down next week (Wed) to discuss operationalizing credit with COO
- Affordability Fund
  - Advisory committee met on Tuesday
    - Consensus on selection of Trust representatives
      - Hydro One, Alectra, Thunder Bay Hydro
      - Ottawa-Carleton United Way, Advocacy Centre for Tenants of Ontario
    - Will follow up on specific representatives from those organizations
    - Given AG questions, important to move on this as quickly as possible

ICI

- Shifted beyond approvals
- Working with OCE and CME on outreach campaigns
  - Asked to participate in next AGM of OCE to provide overview of ICI
- Also coordinating with LDCs to advise them of changes

Other Updates

- TB May 9th
  - Will include social programs

- GA smoothing legislation
- Appropriation approval for equity injection

- IVEY Energy Centre released a report that walked through the merits of GA Smoothing (attached)
- Will re-schedule the next meeting for Tuesday, recognizing budget release date is next Thursday

IVEY Business School
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Energy Policy and Management Centre

Policy Brief
April 2017

The Economic Cost of Electricity Generation in Ontario

EXECUTIVE SUMMARY

- The overall cost of electricity generation, which accounts for almost two-thirds of Ontario's total system costs, has increased significantly since 2005 mainly due to a substitution away from coal generation towards more costly renewable sources, and a parallel increase in the total amount of installed capacity in the province, notably due to an expansion in the amount of natural gas capacity.
- The unit cost of electricity generation is approximated by the sum of the wholesale market price and the Global Adjustment. Wholesale market prices reflect, in part, short-run variable costs, but often fall short of the total cost of producing electricity, which includes significant fixed capital costs. The Global Adjustment is a mechanism that, in conjunction with the wholesale hourly market price, ensures recovery of variable and fixed generation costs. As such, the Global Adjustment is not an overpayment but a component of the full economic cost of generating electricity.
- Recent increases in consumers' electricity bills have been driven in part by the rapid expansion of generation capacity in the province, much of which has been financed under 20 year contracts with private firms. Current rates and electricity bills could be reduced by amortizing contracted generation capital costs over longer periods to match the productive lifespans of the assets, often longer than the contracted terms. The cost of generation charged on consumer bills would then more closely reflect the economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term.

INTRODUCTION

This report brings an economic perspective to the analysis of electricity generation costs and prices in Ontario. Generation accounts for approximately two-thirds of Ontario's total electricity system costs, making consumers' electricity bills particularly sensitive to changes in generation policies and the cost of ensuring that sufficient generation capacity is available to meet demand. In Ontario, the wholesale price of electricity generation has declined since 2006, yet regulated rates for household consumers have almost doubled, creating confusion over the reasons why bills have increased. While a comprehensive analysis of electricity system costs and consumer bills is outside the scope, this report provides an economic cost analysis of the generation component of electricity bills, which can reconcile these seemingly contradictory trends. An important insight, which comes from the experiences

of jurisdictions that have deregulated their power generation sectors, is that wholesale generation markets are often distorted by the effects of administrative restrictions on market operations and by parallel long-term contracting policies, undermining the signals that market prices would otherwise provide for efficient generation production, investment, and consumption decisions. In such markets, wholesale market prices are shaped in part by strategic bidding behaviour of generators, and need not accurately reflect underlying average or marginal costs of generation. Consequently, a complete account of the cost of generation, and its pricing, requires a broad analysis that incorporates a range of generation sector policies.

WHOLESALE ELECTRICITY MARKETS AND INVESTMENT IN GENERATION CAPACITY

In competitive markets with many buyers and sellers, homogenous products and firms, and unrestricted exit and entry, market prices send crucial signals to firms and consumers, and help balance demand with supply. Importantly, these conditions create a close relationship between prices and costs since competitive pressures push prices to the marginal cost of production. External shocks to demand or supply that shift prices will cause firms to enter or exit the market, moving prices to long-run average cost levels over time. For example, an increase in demand that increases prices will encourage new firms to enter the market, subsequently exerting downward pressure on prices. In the long-run, market prices enable firms to recover both fixed and variable costs, and to earn a normal rate of return on capital invested. Hence, in competitive markets, prices are an indicator of the long-run cost of producing goods and services.

Wholesale electricity generation markets, however, generally do not conform to the ideal of an unfettered competitive market (Borenstein, 2016). The distinctive characteristics of electricity markets are many and well known. Electricity is not storable in large quantities so production must match extant demand. Renewable power sources are intermittent, necessitating complementary investment in dispatchable generation capacity that may have low utilization rates. Transmission and distribution are subject to congestion, creating conditions for oligopoly or even monopoly pricing. Demand is highly price-inelastic in the short-term for many consumers, implying consumers are willing to pay high prices for electricity. Variable costs of production are small relative to high fixed costs, especially for renewable power sources, meaning variable costs can be significantly lower than average costs. Renewable power, which governments have encouraged for environmental reasons, often has higher average unit costs than fossil fuels, often requiring additional policy instruments to support private investment. Entry by new generators is highly regulated, and it can take many years for permitting and construction to be completed, leading to extended periods of under- or over-supply of capacity. Under such conditions, wholesale electricity market prices can diverge from average costs for long durations, creating an uncertain investment environment for generators. Two risks are particularly germane:

First, small shocks to demand or supply can lead to rapid escalation in wholesale market prices given short-run price-inelasticity of demand and supply. For instance, in Ontario during September 2002, even though the average price over the month was $83/MWh, it peaked at $1028/MWh, more than twelve times the average. Price spikes reflect scarcity and are a feature, not a flaw, of a well-functioning market. However, dramatic price spikes often create consumer pressure on governments to intervene and reduce volatility by implementing caps. In Alberta, the government capped wholesale market prices at $1000/MWh (Brown and Olmstead, forthcoming). Ontario's maximum wholesale market price is set at $2000/MWh.

One consequence of such intervention is that it can create a "missing money problem" for generators. As one electricity market expert noted, "The missing money problem arises when occasional market price increases are limited by administrative actions such as price caps. By preventing prices from reaching high levels during times of relative scarcity, these administrative actions reduce the payments that could be applied towards the fixed operating costs of existing generation plants and the investment costs of new plants" (Hogan, 2005, pg.1). By limiting the opportunities for generators to recover fixed costs, price caps can act as a disincentive for generators to invest in new capacity.

A second risk for generators is that if markets develop excess generation capacity, wholesale prices will be pushed down towards variable costs, preventing generators from recovering fixed investment costs, which can be large given the capital-intensive nature of electricity production (Borenstein, 2002). Anticipating that future market conditions could change, generators may be unwilling to invest in new capacity—even if current levels are not fully sufficient to meet demand—when costs can only be recouped through wholesale market revenues. Such risks are magnified in institutional environments where government entities can rapidly implement sweeping regulation or policy changes, as in parliamentary systems with majority party control.

For these and other reasons, wholesale electricity market prices often do not send accurate signals to producers or consumers regarding efficient production and consumption behaviour, nor need they create the competitive incentives for generators to make sufficient long term investments in capacity for reliable supply within a jurisdiction, especially in generation technologies that have high average costs relative to variable costs (e.g. renewable fuels) or that have very long payback periods (e.g. nuclear power). This means that governments, even in deregulated markets, often rely on complementary policy mechanisms to enable generators to recover their fixed costs of electricity generation and to remain in the market. Long-run power purchase contracting, which effectively mimics average cost pricing, has been a common approach in many jurisdictions, as have been separate capacity markets (Biggar and Hesamzadeh, 2014). Invariably, however, additional policy instruments do not operate independently but have spillover effects on generator incentives, introducing further complexities and distortions in the operation of wholesale markets.

ONTARIO'S GENERATION SECTOR AND WHOLESALE MARKET

Background

Over the last half century, several structural shifts have fundamentally changed the nature and cost profile of Ontario's electricity generation sector. Major nuclear generating capacity was brought online during the 1960s to 1980s, transforming baseload generation in the province. Construction costs proved to be significantly greater than expected, however, leading to rate increases of more than 30% in the early 1990s, shortly followed by a rate-freeze imposed by a new (NDP) government in 1993 (Trebilcock and Hrab, 2005).[1]

The second structural change occurred in the late 1990s and early 2000s when the province, in concert with many other jurisdictions that were seeking greater electricity sector efficiencies, experimented with market deregulation and restructuring. In May 2002, the Progressive Conservative government launched a competitive wholesale

[1] The rate freeze remained in place until the Government launched the competitive retail market in 2002.

electricity market and a short-lived competitive retail market. Hot summer temperatures combined with a shortage of generation capacity triggered wholesale price spikes and rapid increases in consumer bills (Trebilcock and Hrab, 2005, pg. 126). Yielding to public pressure to reduce 'rate shock', the government quickly reversed course, closing the retail market in November 2002, implementing a rate freeze, and shelving plans for privatization and restructuring of state-owned generation assets. The government retained the wholesale market with the expectation that it would encourage private investment in new generation capacity.

The third structural shift began in the mid-2000s under a newly-elected Liberal government that sought to rebuild the supply portfolio to address a generation shortfall, and also to rebalance the supply mix, notably by reducing the share of coal generation while phasing in renewable sources such as wind and solar.[2] Since the private sector was reluctant to invest in merchant generation assets, the government created the Ontario Power Authority (OPA) in 2004 to enter into long-term power purchase contracts with generators, operating under the direction of the Minister of Energy. To expedite the government's policies and to avoid repeating the 2002 summer-time supply shortages, the government implemented a series of long-term contracting programs for specific types of generation technologies, including through competitive procurements, standard offer or feed-in tariff programs, and bilateral negotiations with private generators. Under each of these mechanisms the government guaranteed to buy power at a fixed unit rate over a specified time period, commonly 20 years.[3]

Since 2005, the OPA (now the IESO) has contracted for approximately 6,000 MW of wind capacity and more than 2,600 MW of solar capacity (IESO, 2016a). In total, the IESO has contracted for more than 27,000MW of energy. Ontario Power Generation (OPG) controls significant additional nuclear and hydroelectric capacity whose rates are regulated by the Ontario Energy Board.

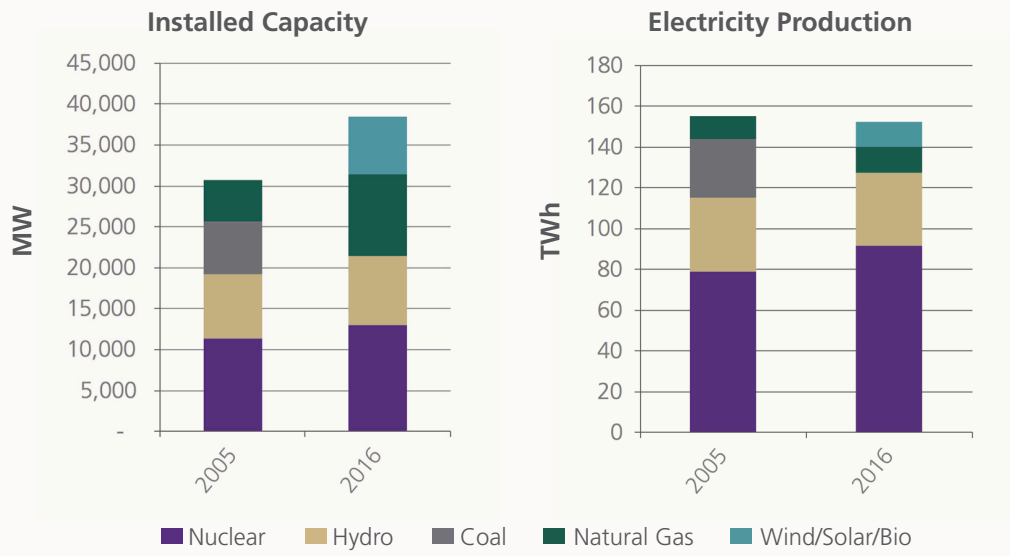
Figure 1 shows how the province's generation profile, including both contracted and regulated components, has changed over the eleven year period since 2005. Overall, the province expanded its installed generation capacity by a net 8,000 MW, increasing to a total of approximately 38,500 MW in 2016. Nuclear power has remained the single largest component, accounting for 11,400 MW in 2005 (37% of total capacity), increasing to 13,000 MW in 2016 (34%). Hydroelectricity was the second largest component in 2005 at 7,900 MW (26%), and has increased marginally to 8,500 MW in 2016 (22%). The most significant changes have been in renewable and natural gas generation. Wind, solar and bio-energy power sources added 7,100 MW over the eleven year period, and accounted for 18% of total installed capacity in Ontario in 2016. Natural gas installed capacity doubled between 2005 and 2016 (adding approximately 5,000 MW), increasing its share from 16% to 26%. Coal, which accounted for 21% of capacity in 2005, was eliminated from the supply mix by April 2014.

In terms of electricity production, overall power output in the province decreased marginally from 155 TWh in 2005 to 152 TWh in 2016. Nuclear accounted for the majority of output (92 TWh, 60% of overall output in 2016), and has increased both the absolute amount and its share of output since 2005. Hydroelectric power generation has remained steady at 36 TWh, and is the second largest component of overall output (23% in 2005 and 2016). Wind, solar and bio-energy accounted for approximately 8% of power output in 2016 (12 TWh). Natural gas output increased marginally between 2005 and 2016, despite the doubling of capacity, and accounted for about 8% of total output in 2016.

[2] Electricity Conservation and Supply Task Force, Final Report to the Minister, January 2004

[3] Contracts for natural gas generation were more complex and included clauses for fixed monthly payments.

Figure 1: Installed Capacity and Electricity Production by Fuel Type, 2005 and 2016



Source: IESO Supply Mix data and Ontario Power Authority 2005 Supply Mix Advice.

Investment in new generation capacity since 2005 has been supported in large part by long-term contracts with private generators that specify a fixed purchase price for energy produced (e.g. $135/MWh for wind power under the FIT program), though they are structured as 'contracts for differences', which provide two related components of revenue for the generators. The first component consists of the prevailing wholesale market price for power, referred to as the 'Hourly Ontario Energy Price' (HOEP). Since wholesale prices may be less than the contracted rate, the second component is the difference between the agreed contract rate and the wholesale price, and is included in the 'Global Adjustment' generation charge. The Global Adjustment consists of the costs of payments to contracted generators, as well as the costs of conservation expenditures, and payments to regulated generators. It exists because, in general, market-based revenues are insufficient to cover the full costs of contracted or regulated generation. The combination of the Global Adjustment and the Hourly Ontario Energy Price effectively represents average cost pricing, enabling generators to recover their variable and fixed costs.

Wholesale Electricity Market

Ontario's wholesale electricity market operates as a mechanism for dispatching generation units in order to ensure a reliable and continuous supply of electricity. The wholesale market price—the HOEP—is determined by offers submitted in advance by generators that specify the amount of power they are willing to provide and the offer price. The HOEP is the hourly average of twelve five-minute market-clearing prices that balance supply and demand. The five-minute market-clearing price, and ultimately the HOEP, is based on the offer of the marginal generating unit, and all dispatched generators, regardless of their offer, receive market revenues at the market-clearing price. Generators that submit offers greater than the five-minute market-clearing price are not dispatched and do not receive wholesale market revenues.

Since 2005 there has been a declining trend in the hourly energy price on the wholesale market, as illustrated by

Figure 2. Contributing factors include falling natural gas prices, lower demand for electricity within the economy, and expansion of generation capacity with low to zero marginal costs such as wind, solar and hydro. In the eight year period 2009 to 2016, the hourly energy price averaged $28/MWh, significantly below the average total cost of virtually any type of generation technology. Such wholesale prices are insufficient by themselves to incent investment in new dispatchable generation capacity, for instance natural gas, which is needed to complement the growth of intermittent renewable generation.

The decline in Ontario's wholesale market price does not necessarily imply that the average cost of generation has also declined, nor is the wholesale price necessarily an indicator of the average generation cost at any point in time. Two explanations are germane: first, in generation markets with excess capacity, such as in Ontario, wholesale prices are largely determined by variable or marginal production costs, not by average costs which additionally reflect fixed capital costs. A significant presence of renewable resources, which have low variable costs, further drives a wedge between wholesale prices and average costs.

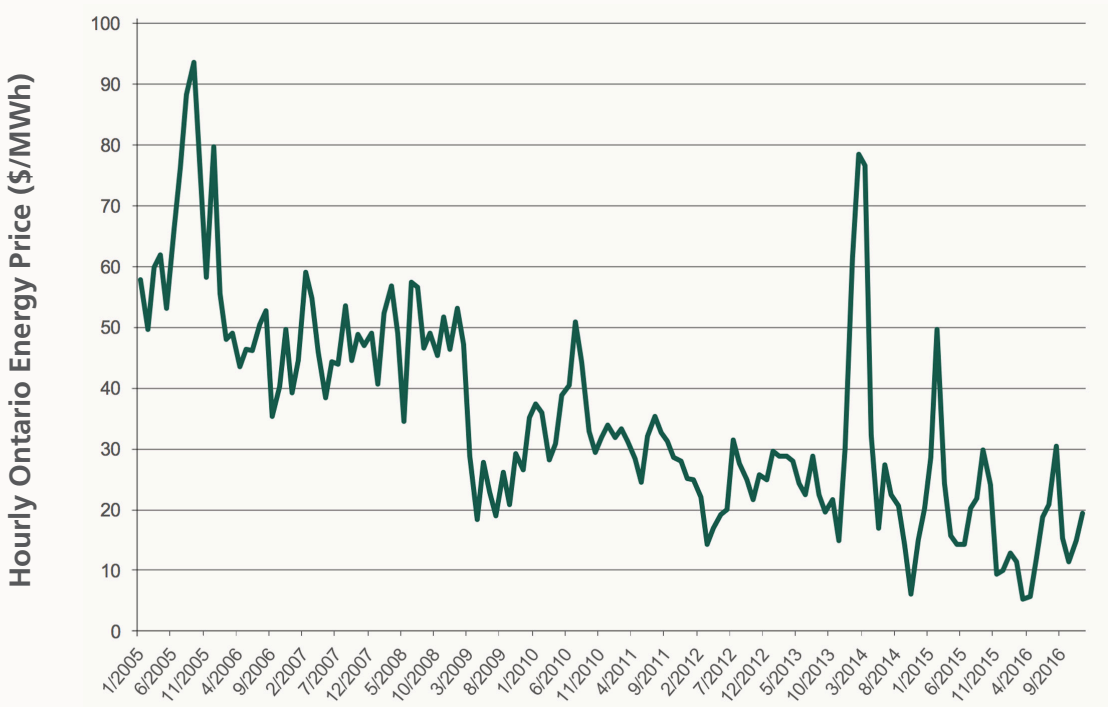
Second, strategic behaviour by generators can distort wholesale prices below even their marginal costs of production. For instance, before September 2013, renewable generators such as wind and solar were at times submitting offers to the market at prices equal to -$2000 per MWh. Notionally, an offer of -$2000 per MWh suggests that wind generators are willing to pay the operator $2000 per MWh dispatched, an unlikely proposition. In reality, wind generators knew that they were guaranteed to receive their contracted, fixed power purchase rate per MWh and wanted to ensure their power gained a favourable position in the merit order and was dispatched. Due to such strategic bidding behaviour by generators, between 2009 and 2014, the HOEP was negative for almost 2000 hours (equivalent to 83 days).[4] In response, in late 2013 the IESO established floor prices for transmission-connected wind and solar generation offers at -$10 per MWh for the first 90% of capacity (subsequently increased to -$3 per MWh) and -$15/MWh for the remaining 10% (Navigant, 2014b). Similarly, manoeuvrable nuclear generators have an offer floor of -$5 per MWh to limit strategic bidding. These examples illustrate that generators are not necessarily offering their production cost, but instead are adjusting their offers in accordance with the terms of their fixed price contracts.[5]

In this sense, generators' long-term purchase contracts can distort the wholesale market price since they reduce the incentives for generators to make offers in the wholesale market based on their cost of production. While the wholesale market price does not provide a perfect economic signal to producers and consumers, this does not imply that the wholesale market dispatch mechanism operates inefficiently over the short-term. Provided that the dispatch merit order is maintained, the five-minute market-clearing price still sends a reasonably accurate signal for short-term dispatch, and generally ensures that lower cost sources of electricity are dispatched before higher cost sources.

[4] Annual Report of the Office of the Auditor General of Ontario, 2015, page 216.

[5] In a slightly different context, Harvey (2013, pages 1-2) states that the hourly Ontario energy price "does not reflect the actual cost of meeting load … and therefore does not send an accurate signal for longer term decisions, such as the entry or exit of generation or of particular types of generation, for increases or decreases in power consumption, or for generators and dispatchable loads." Moreover, no entity in the province purchases electricity via the wholesale market (Alpin, 2017).

Figure 2: Hourly Ontario Energy Price



Source: IESO

THE COST OF GENERATION IN ONTARIO

The cost of contracted generation, which accounts for the majority of capacity in the province, is approximated by the sum of the wholesale market hourly spot price and the Global Adjustment amount, which acts as a full cost recovery mechanism (MacDougall, 2012).[6]

The formal description of the Global Adjustment is outlined in Ontario Regulation 429/04.[7] Officially, it is a payment variance that reconciles the difference between the earned revenues in the wholesale market and the rates established via contract. The relationship between the hourly Ontario energy price and the Global Adjustment may be characterized as a seesaw. When the hourly Ontario energy price goes up, the Global Adjustment goes down; and when the hourly Ontario energy price decreases, the Global Adjustment increases. This relationship is automatic and mechanical. Importantly, this seesaw relationship implies that neither the wholesale price nor the Global Adjustment by themselves provide an accurate 'market signal' to consumers or generators. Further, it is incorrect to interpret the Global Adjustment as an overpayment or 'above-market' payment for generation, as some commentators have claimed, since the wholesale price is not a true market price as would be observed in

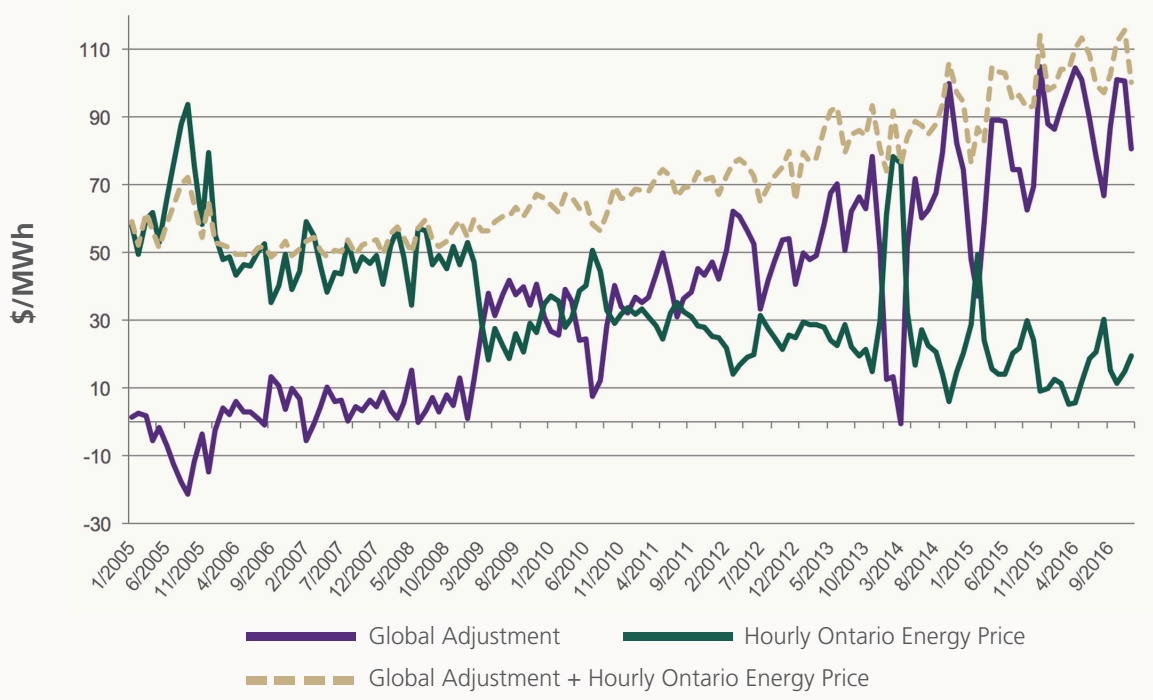
[6] Non-contracted generation includes Ontario Power Generation's nuclear and hydro electricity assets which have rates established through cost-of-service regulation.

[7] Section 1(1) of 429/04 precisely presents the calculation of the Global Adjustment.

normal competitive markets. The appropriate counterfactual for Ontario prices is less obvious than it might seem at first inspection and needs to be formulated as the inclusive price that covers both variable and fixed costs in the absence of policy intervention.

Figure 3 illustrates the hourly Ontario energy price and the unit Global Adjustment amount from 2005 to 2016. The hourly Ontario energy price is calculated as an hourly average of 5-minute dispatch prices, which are determined in the real-time market. The Global Adjustment is calculated monthly, and is based technically on the difference between the hourly Ontario energy price and (i) IESO's contracts with generators, (ii) contracted rates administered by the Ontario Electricity Financial Corporation, and (iii) OPG's regulated nuclear and hydro generation rates (IESO, 2016b). The seesaw or inverse relationship between the Global Adjustment and hourly wholesale energy price is immediately obvious in the Figure.[8] While the hourly price has steadily declined since 2005, albeit with natural monthly variation, the Global Adjustment has increased over the same period, mirroring monthly movements in the hourly price.

Figure 3: Hourly Ontario Energy Price and Global Adjustment, 2005–2016

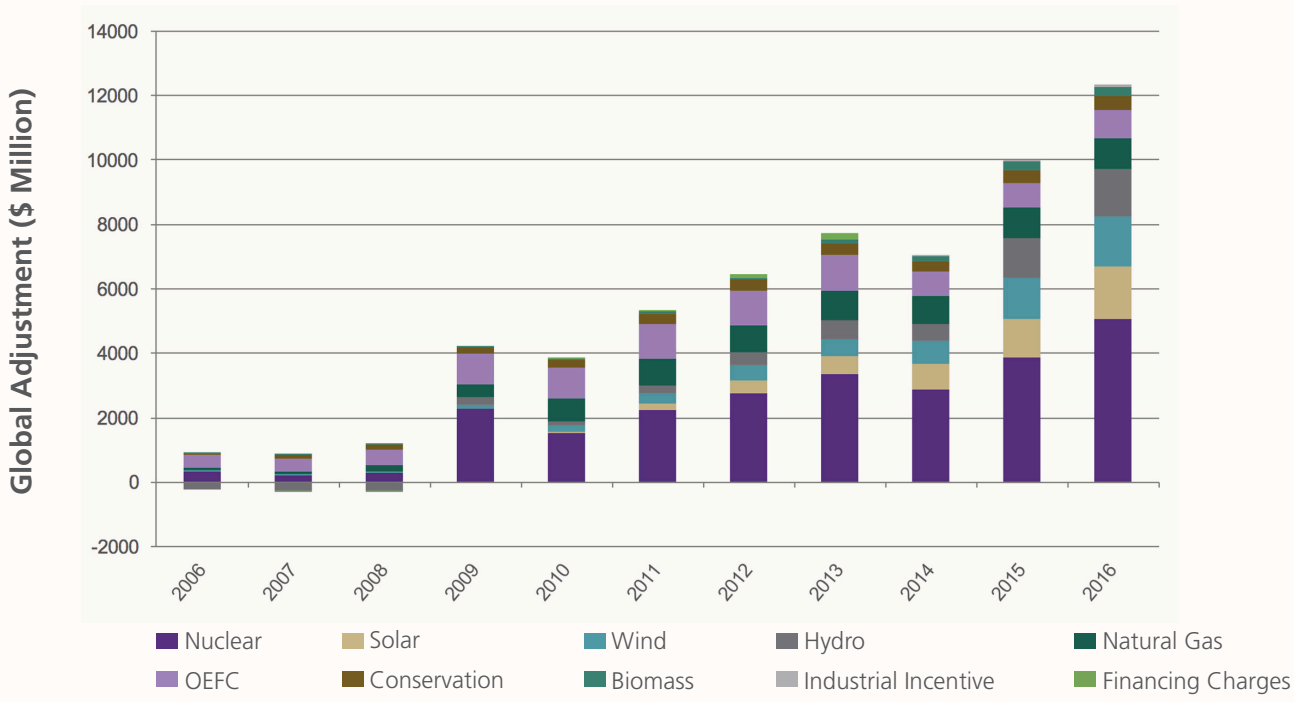


Source: IESO

[8] The relationship is not a perfect one-for-one because the Global Adjustment is a true payment variance and hence includes the costs of conservation programs and financing charges. Also because the Global Adjustment shows up in customers' biannual rate plans, the Global Adjustment, in conjunction with the hourly Ontario energy price, induces a small demand response.

Decomposing the Global Adjustment into its components provides some insight into the share of costs attributable to different generation fuels as shown in Figure 4. It does not provide an accurate picture of total generation costs by fuel type since it does not include costs recovered through wholesale market revenues, though these were a minor share in 2016. The overall Global Adjustment was $12.3 billion in 2016. Nuclear accounted for the single largest share of Global Adjustment costs at 41%. Solar and wind power each accounted for 13%, hydroelectric power for 12%, and natural gas for 8%. Other components summed to 13%.

Figure 4: Global Adjustment by Component, 2006–2016



Source: IESO

REASONS FOR GENERATION COST INCREASES

Rates paid for electricity in Ontario have increased despite a steadily decreasing wholesale market electricity price due to corresponding increases in the Global Adjustment as previously described. While a formal analysis of the sources of these rate increases is beyond the scope of this report, it is valuable to briefly review some of the underlying reasons for the increase in generation costs.

The average unit cost of generation (per MWh) is represented by the dashed line in Figure 3, the sum of the hourly wholesale price and Global Adjustment. From 2006 until 2009, the average cost was relatively stable, remaining between $50 and $60/MWh. Since 2009 there has been a continuous upward trend in the average cost of generation, reaching more than $110/MWh by late 2016. Several factors have contributed to this trend:

Phase out of low cost coal-fired generation. Between 2005 and 2014 Ontario gradually phased out all coal-fired plants, which provided 25% of power generation in the province at a relatively low unit cost (approximately $48/MWh). The coal fleet was reaching the end of its productive life, and new capital investment required to replace it would have increased system-wide costs of generation, and hence rates, regardless of the replacement type of generation fuel. For example, the refurbishment of Bruce Power nuclear units, which provide base load power, yields power at a contracted rate of $66/MWh. Offsetting higher costs, however, are health and environmental benefits from switching from coal to less emission-intensive fuel sources.

Increasing share of renewable fuels. The 2009 *Green Energy and Green Economy Act*, and initiatives such as the Renewable Energy Standard Offer program launched in 2006, have led to the development of a significant amount of wind, solar, hydroelectric, and bio-energy capacity, supported by fixed feed-in tariffs guaranteed for 20 years. Between 2005 and 2016, the province added approximately 7,100 MW of new wind, solar and bio-energy capacity, accounting for 18% of installed capacity in 2016. The rates paid for renewable power are greater than rates paid for nuclear and hydroelectric power which provide the bulk of electricity for the province, for instance ranging from $135/MWh for on-shore wind to $443/MWh for ground-mounted solar PV under the 2012 FIT pricing schedule. Power purchase prices for new solar capacity have since declined as technology costs have fallen steeply, but remain above levelized unit costs for natural gas and nuclear power. In addition to higher direct costs, the expansion of renewable generation capacity has required complementary investment in transmission and distribution sector upgrading, an indirect cost implication for the electricity system.

The Ontario Energy Board provides annual estimates of average generation costs by fuel type based on total payments to generators operating under all contract and regulation mechanisms. The OEB's 2016-17 estimates illustrate the higher average cost of wind, solar and bio-energy relative to nuclear and hydro (see Table 1). It is notable that the average cost of natural gas power is greater than wind and bio-energy power, despite low wholesale gas prices, which may be account for the low capacity utilization of natural gas generation assets.

Table 1: Average Costs of Generation per MWh by Fuel Type

Generation Fuel	Average Unit Cost ($/MWh)
Nuclear	66
Hydro	58
Natural Gas	173
Wind	140
Solar	480
Bio-Energy	131

Source: Ontario Energy Board Regulated Price Plan Report, November 2016 to October 2017. Hydro excludes NUGs and OPG non-prescribed generation. Gas includes Lennox, NUGs and OPG bio-energy facilities.

Overall growth in installed generation capacity. Expansion of the province's generation portfolio began in the early 2000s when the economy was growing robustly and when there were heightened concerns about supply outages, especially following the major regional blackout in Ontario and the north east U.S. in August 2003. In addition, given the shift towards renewable power generation, which is intermittent, the province needed to invest in complementary natural gas or other dispatchable capacity that could operate during periods when renewable power was not available. Ontario added 5,000 MW of natural gas capacity between 2005 and 2016, much of which provides peak and mid-peak power, to bolster system reliability and to satisfy regional needs. The overall amount of installed capacity in the province has increased significantly over the last decade. In 2016, installed capacity was approximately 38,500 MW – a 25% increase from 30,500 MW in 2005. While capacity has grown, however, overall annual domestic demand for grid power has declined, due to a combination of pricing

effects, weaker economic growth, enhanced conservation efforts, and expansion of distributed energy resources. According to IESO data, grid demand declined by 10% from 2006 to 2015, reflecting, in part, the impact of the 2008 Great Recession. Annual peak grid demand has also fallen sharply, from an all time high of 27,000 MW in August 2006 to 22,500 MW in 2015. While long-term forecasting of electricity demand is notoriously difficult, the province has invested in new generation capacity that has proved to be in excess of typical needs, contributing to higher system-wide costs and consumer bills.

SMOOTHING CONTRACTED GENERATION COSTS

The rapid pace of contracting for new generation capacity since 2005 has contributed to a corresponding escalation in consumers' electricity bills. Over the last decade, regulated electricity rates for residential consumers have almost doubled, creating a degree of 'rate shock' and leading to calls for generation market reform. While the government has taken some heat for rising bills, there is a potential policy solution that is economically rational and relatively simple to implement. The government could smooth the costs of contracted generation capacity—which account for more than half of electricity system costs—over a longer period of time than is currently planned, reducing consumer bills in the short to medium term in return for slightly higher bills in the long term. This is akin to household mortgage refinancing that lowers monthly payments by extending the term.

The economic rationale for such a smoothing policy is that the useful productive lives of contracted generation assets—payments for which constitute the bulk of Global Adjustment charges—are in many cases longer than the durations of the contracts. For instance, wind power RESOP, FIT and LRP contracts are structured for 20 years, even though wind turbines and equipment may be expected to operate for 30 years or longer, assuming periodic maintenance and refurbishment is undertaken. Similarly, natural gas generation contracts are generally for 20 year periods, though in the U.S. gas plants have often been retired after 40 years. Besides wind and natural gas, there may be additional generating assets that present opportunities to smooth costs for consumers. Under 20 year contracts, generator capital costs are amortized too quickly relative to the useful life, leading to higher annual capital charges than would be the case if the amortization period was extended to the full expected life span.[9] Charges to consumers for contracted generation could hence be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged on consumer bills would more closely reflect the true economic costs of the assets.[10]

There are three possible methods to accomplish generation cost smoothing in Ontario, recognizing that many new contracts with generators have already been signed over the preceding 12 years.

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[9] Generators have strong incentives to fully amortize fixed capital costs over the duration of the contract, and to build these costs into competitive supply bids, even if the contract duration is shorter than the expected lifespan of the asset. Once a generation facility is constructed it becomes a physically sunk asset, leaving the generator with considerably reduced bargaining power at the end of contract. Even if the government wishes the generator to continue operating after the end of the contract, it may offer to purchase power only at the variable or operating cost of production, providing minimal opportunity for the generator to recoup sunk fixed capital costs. As long as the purchase price at least covers variable costs, it is rational for the generator to accept the government's terms and to operate.

[10] The same smoothing principle could be applied to other generating assets where contract durations are less than expected asset lifespans. It is also applicable for expenditures on conservation projects, which can involve upfront investments in capital assets that reduce electricity demand over multiple years. For instance, high efficiency industrial refrigeration compressors are expected to operate for more than a decade. Currently, conservation expenditures are fully recouped in Global Adjustment charges in the year in which they occur. The Ministry of Energy estimates that smoothing conservation expenditures over asset lifespans could reduce electricity system costs in the short term by $300-$500 million.

1. Option for existing generators to bid for new long-term contracts

First, the government could offer generators with existing contracts the opportunity to bid for new contracts that would supersede their current contracts, stipulating that (a) the time horizon for a new contract must extend beyond the current one, and (b) the new purchase price for electricity for the duration of the new contract must be lower than the current contracted rate. If the generator and government reach agreement on new terms the new contract would replace the original one. Otherwise, the original contract would remain in force.

From the generator's perspective, this provides an opportunity to lengthen the time horizon of financial returns on their investment, and to increase the extant expected net present value of the project. It also pre-empts a potentially challenging renegotiation with the government at the end of the original contract when the assets still have productive capabilities but have been fully amortized. From the government's perspective, generation costs would be smoothed over a longer period of time as determined by individual generators on a case-by-case basis, lowering average electricity bills in the short to medium term.

There are several caveats with this approach. First, substantial rate reductions will be achieved only if there is sufficient competitive bidding pressure between generators for contract extensions. Since future demand for electricity in the province may well decrease, the government need not extend all generator contracts, which could create some implicit bidding competition – but the likely degree of competition and downward pressure on rates is uncertain ex ante. Second, the process of negotiating contract extensions could be administratively complex and time consuming for both the government and generators. The government has contracted with thousands of private entities since 2005. Generators would also likely need to renegotiate their own contractual arrangements with a range of parties in addition to the government, including landowners, financiers, local communities, and Aboriginal groups, a complex and uncertain exercise. A third caveat is that providing new long-term contracts to generators could impact the proposed introduction of a capacity market in Ontario if generators became less willing to participate in capacity auctions.

2. Short-term government subsidization of payments to generators

An alternative and potentially simpler approach for smoothing the amortization of generation costs is for the government to subsidize, in the short to medium term, a portion of annual contracted payments to generators operating under existing contractual terms, and to reduce consumer bills by the corresponding amount. The subsidy each year would equal the difference in annual amortization currently charged (based on the contract duration) and the annual amortization amount calculated using the productive life of the asset. Interest rates on government debt (which would fund the short-term subsidy) are currently very low (2.4% on Ontario's recent 10-year bond issue), making this a relatively cost-effective strategy, though it would increase public sector debt. Generator contracts would be unchanged in this scenario. An advantage of this approach is that it avoids the administrative cost and uncertainty of renegotiating in a short time period multiple contracts on an individual basis with generators, and it can be implemented relatively rapidly. On the other hand, the government would ultimately still need to negotiate new contracts with generators when existing ones expire in the future, in order to ensure that generation assets continue to operate, where needed, beyond 20 years.

In both approaches, the quid pro quo is that consumers would pay more for electricity in the future to reflect the longer amortization period, specifically during the years beyond the end of the original contract and up to the useful life of the generation assets. Generator refurbishment and maintenance costs may also increase for older assets, implying upward pressure on rates when generator lives are extended beyond anticipated contract end dates.

3. Long-term contracting policy

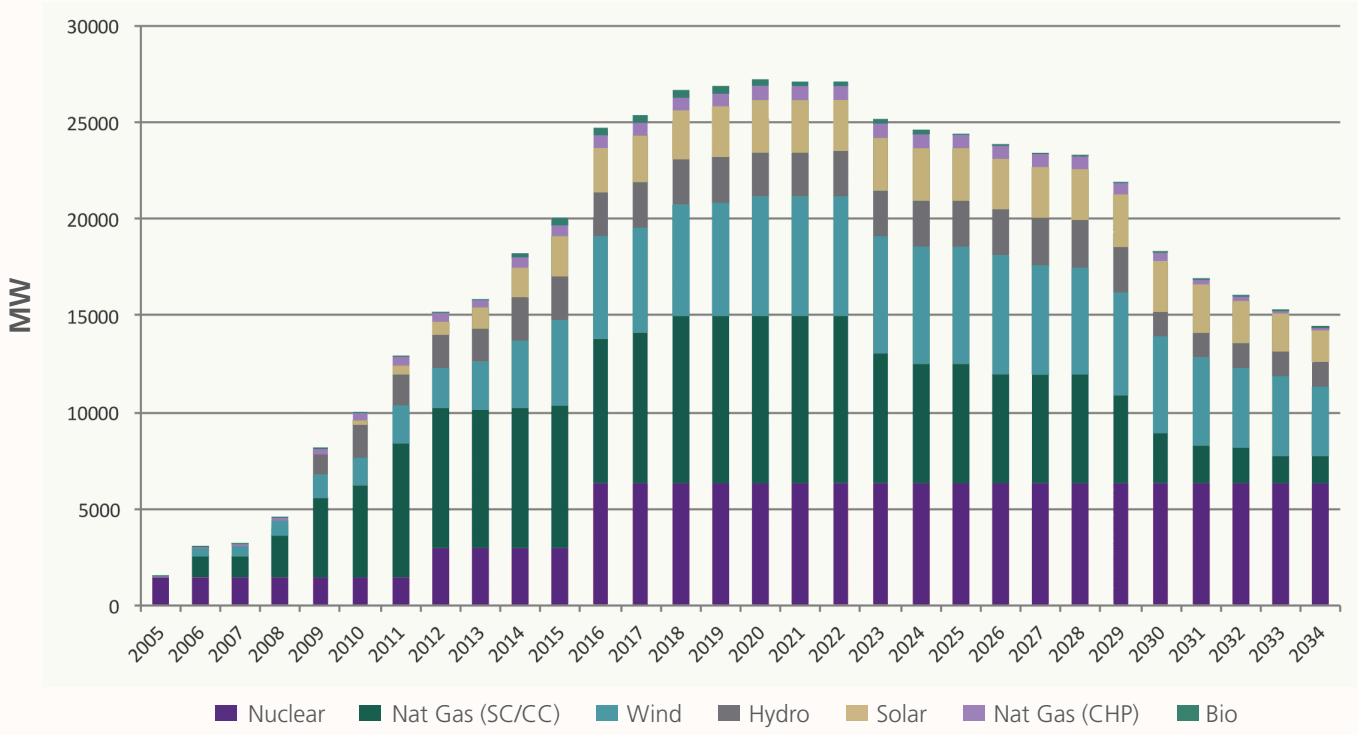
In future contracting exercises for new generation capacity, the government could invite generators to submit bids that include the proposed contract duration, and evaluate such bids on the basis of contract duration as well as on purchase price and other factors. Providing flexibility on duration would encourage generators to match the contract period to the expected productive life of the asset, resulting in (lower) annual amortization costs that reflect the true economic cost.

Preliminary Estimate of Impact of Smoothing Contracted Generation Costs

Estimating the potential impact on electricity bills from stretching out generation asset amortization periods requires detailed information on the terms of generator contracts, which are not publicly available. Assumptions based on available Ontario Energy Board (OEB) and IESO data, however, can lead to approximate calculations, albeit with circumscribed confidence in their accuracy.

Since 2004 the Ontario government has contracted for a significant amount of new generation capacity through competitive procurement exercises, bilateral negotiations, and feed-in tariff programs. By 2006, approximately 3,000MW of newly contracted capacity was operating; by the end of 2016, almost 25,000MW of contracted nuclear, natural gas, hydro, wind, solar, and bio-energy capacity was in place, representing a dramatic increase in procurement over a 10-year period. New procurement is expected to slow down in the coming years, reaching a peak of 27,000 MW accumulated contract capacity in 2020.

Figure 5: Contracted Generation Capacity by Fuel Type, 2005–2034

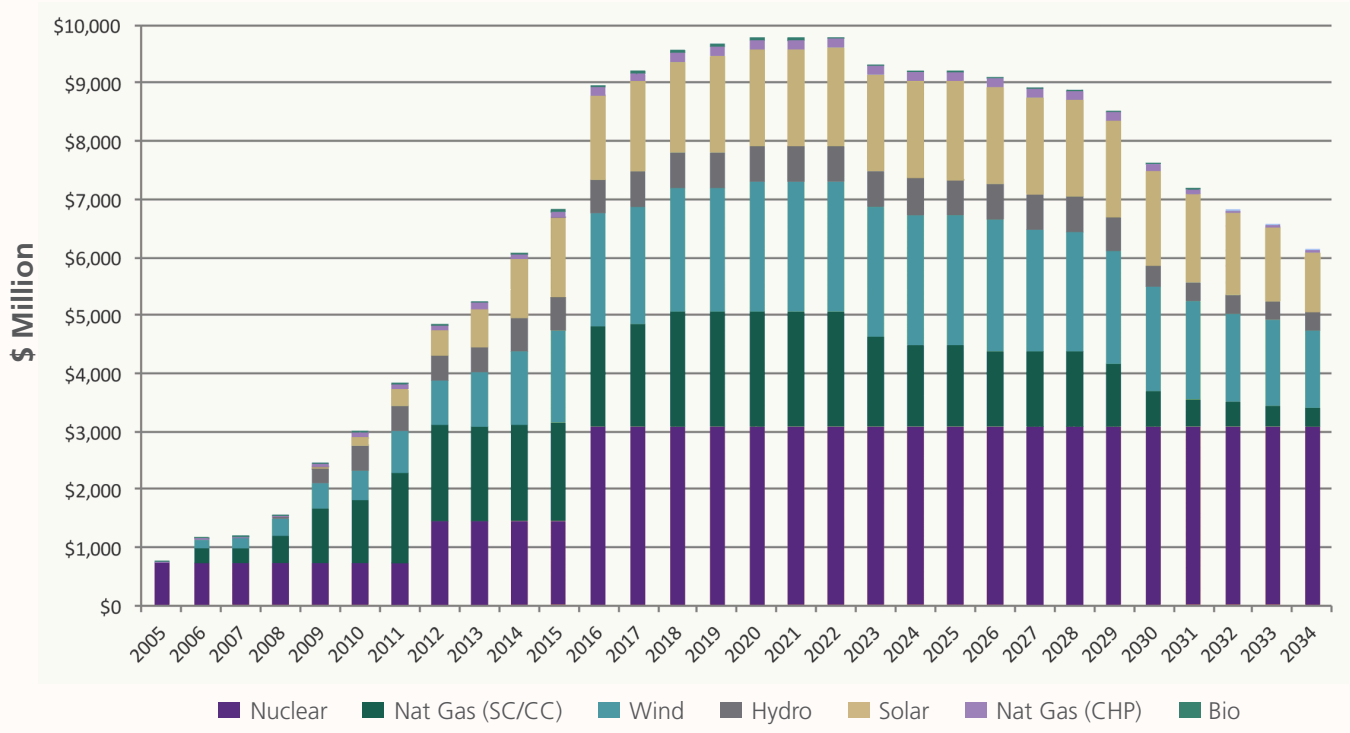


Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016. 'Other' fuel category omitted for simplicity.

Figure 5 shows the amount of accumulated contracted capacity for each fuel type for the 30-year period from 2005 to 2034. There has been a significant increase in contracted natural gas generation (representing 33% of total contracted capacity in 2017), as well as in nuclear (25%) and wind (22%). Solar, hydro, bio-energy and other fuels account for the remaining 20% of the 2017 total. OEB data on the average unit cost of electricity by fuel type, and IESO data on capacity utilization, leads to approximate estimates of the annual cost of contracted generation capacity.[11] In 2016, payments to contracted generators are estimated to have totalled approximately $9 billion. The estimated costs of contracted generation by fuel type are shown in Figure 6.

An important feature of Figures 5 and 6 is that they chart the contractual duration of capacity, not the useful productive lifespan of the generating assets. According to the IESO, contract terms vary from 5 to 21 years for bio-energy to 31 to 57 years for nuclear units. For natural gas and wind generation, as well as solar, contract periods appear to be somewhat shorter than typical estimates of expected lifespans (see Table 2), though lifespan estimates depend on a multitude of factors such as the specific technology type within a broad category, capacity utilization, and climate conditions. Some caution must thus be used in applying average industry lifespans to the specific case of generators in Ontario.

Figure 6: Estimated Cost of Contracted Generation, 2005–2034



Source: Author estimates. 'Other' fuel category omitted.

[11] Average effective power purchase rates per MWh for each fuel type are assumed to be as calculated in the OEB's Regulated Price Plan Report, November 2016. Rates range from $58/MWh for hydroelectric generation to $480 for solar. The same rates are applied each year in the analysis, though it is expected there will be variation in practice due to the changing mix of generation contracts with different purchase terms. Capacity utilization is estimated based on IESO reported installed capacity availability and actual power production for each fuel type in 2016 (http://www.ieso.ca/Pages/Power-Data/Supply.aspx)

Table 2: Durations of Generator Contracts and Expected Asset Lifespans[12]

	IESO contract duration (range)	IESO contract duration (mid point)	IEA lifespan estimate[13]	EIA lifespan estimate[14]
Natural Gas	10–20 years	15 years	30 years	30 years
Wind	20	20	25	30
Nuclear	31–57	44	60	
Hydro	20–50	35	80	
Solar	20	20	25	30

Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016.

Nonetheless, estimates of the impact of smoothing generation costs on consumer bills can be calculated under hypothetical scenarios where generator lifespans are assumed to extend to 30 years for natural gas plants and wind farms, and 25 years for solar PV (existing contracts are assumed to all be for 20 years). We do not model contract extensions for nuclear power given the specific nature of CANDU technology, or for hydroelectricity, bio-energy or CHP which are a relatively small share of total contracted capacity costs.

By the end of 2017, contracts for natural gas generation will be an estimated 8 years old on average, implying that 40% of original capital costs will have been amortized. Amortizing the remaining 60% of capital costs over the next 22 years instead of the originally-planned next 12 years suggests a reduction of up to 45% in annual natural gas generator capital charges may be possible in 2018. For wind power contracts, which will be on average 5 years old in 2017, the equivalent potential reduction in annual capital charges is up to 40% in 2018, and for solar 25%.[15]

In 2018, the total value of reductions in natural gas, wind and solar generation capital charges is estimated to be in the range of $1.5–$2.0 billion (see Figure 7), equivalent to approximately 8% of total expected electricity system costs. The amount of the annual reduction declines gradually over time in part due to interest costs on debt for the accumulated subsidy.[16] Additional asset refurbishment expenses in the latter part of the lifespan of generation assets would also reduce the amount of annual savings. After 2030, bills are forecast to be higher for several years than they would have been without smoothing.

[12] Retirement ages of generation plants also indicate lifespans. In the U.S., natural gas plants have often reached more than 40 years before retiring (Powell, N. America's Ageing Generation Fleet. Power magazine, 28 January 2013).

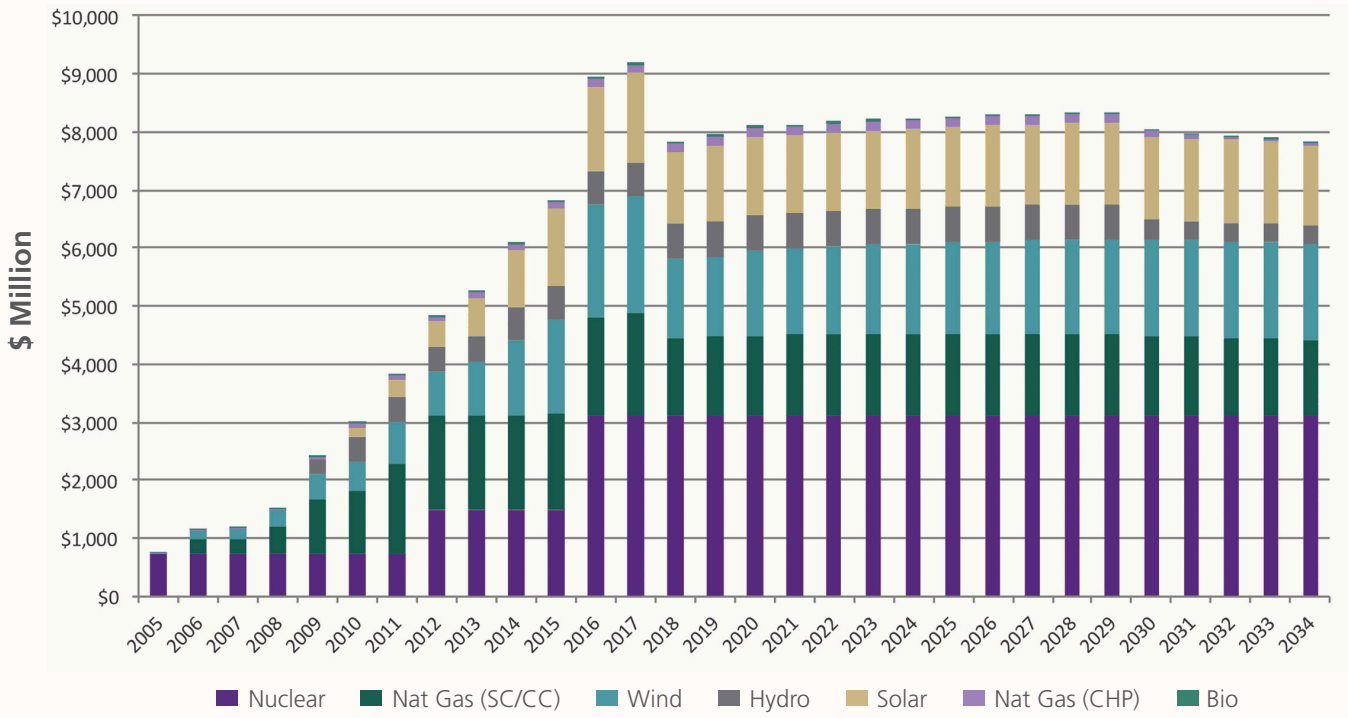
[13] International Energy Agency. 2015. Projected Costs of Generating Electricity.

[14] Energy Information Administration. 2016. Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2016. August 2016.

[15] Smoothing is applied only to the assumed capital component of unit generation costs. For wind and solar power which have zero fuel costs, and relatively low variable operation and maintenance costs, it is assumed that 90% of the power purchase rate is accounted for by capital costs. For natural gas capacity, which is assumed to have an average capacity utilization rate of 15% based on IESO data, and an average effective power purchase rate of $173/MWh (based on OEB estimates), the capital cost share is assumed to be 70%. Lower capital cost percentages would reduce the impact on current consumer bills of a smoothing policy.

[16] The interest rate on long-term debt is assumed to be 2.4%, which is the most recent rate on 10-year Ontario government bonds. Annual interest charges on the accumulated debt are assumed to be paid in full in each year by ratepayers through inclusion in electricity bills.

Figure 7: Estimated Smoothed Cost of Contracted Generation, 2018-2034



Source: Author estimates. 'Other' fuel category omitted.

These estimates are preliminary and reflect the specific assumptions of the model. Alternative assumptions would naturally lead to larger or smaller reductions in near-term contracted generation costs. They are also calculated for option (2) above in which the government finances the smoothing of contracted generator payments over an extended period, leaving original contracts unchanged. The alternative approach outlined in option (1), where generators bid competitively for new long term contracts that supersede existing ones, may deliver similar savings if all contracted generators participated and agreed to equivalent reductions in power purchase rates.

While smoothing generation costs can ease the transition for current households and firms to a higher cost electricity system, there are risks and limitations associated with such a policy. One risk is that future changes in markets, technologies, government policy, or demand for electricity may reduce the need for longer-lived generation capacity, potentially creating future stranded costs. In addition, an important consequence of smoothing is that it raises questions about inter-generational equity since consumers in the long-term future will contribute towards a larger share of generation capital costs, and consumers will also pay interest costs associated with short-term subsidization of rates. Some commentators have advocated for the status quo, citing the imposition of interest costs on future consumers as inequitable. However, the corollary to this argument is that the current approach of amortizing generation capital costs too quickly relative to expected lifespans is effectively a subsidy by current ratepayers of future consumers, who would have usage of the assets but not have to contribute to their capital costs. In addition, as economic growth continues, future generations will be wealthier than today, making any given level of electricity costs more affordable.

CONCLUSION

Wholesale electricity markets in many jurisdictions exhibit a variety of imperfections that affect investment, production, and consumption decisions. Wholesale market prices for electricity, including in Ontario, often do not provide an accurate representation of the full economic cost of production, which consists of short-run variable costs (e.g. fuel costs) and long-run fixed capital costs. Wholesale prices are often determined instead by short-run variable costs, especially in environments where there is excess generation capacity, implying that additional mechanisms—such as long-term power purchase contracts—are needed to enable generators to recover their full costs.

Since 2006, the hourly market price for electricity in Ontario has steadily fallen, owing to a decrease in demand and the addition of new capacity resources with low short-run variable costs. At the same time, the underlying cost of generation has increased as the province has made investments in new and refurbished capacity to ensure system reliability and to replace coal, and also added wind and solar supply—which are more costly than nuclear, hydro-electric, and coal generated power—in order to achieve environmental goals. The full cost of generation is reflected in the sum of the hourly wholesale market price (HOEP) and Global Adjustment, which enables generators to recover both short-run variable and long-run fixed costs of electricity production. The Global Adjustment is thus an important component of ensuring a well-functioning generation sector.

Despite the rapid escalation in generation costs that Ontario has experienced since 2005, there is an economic rationale for smoothing rates and reducing electricity bills for consumers in the short-run. Amortizing contracted generation capital costs over longer periods to match with the productive lifespans of the assets, which are often longer than the contracted terms, could reduce current electricity system costs by approximately eight percent, a preliminary estimate. Under this approach, the cost of generation charged on consumer bills would more closely reflect the true economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term, raising the challenging issue of inter-generational equity.

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ABOUT THE IVEY ENERGY POLICY AND MANGEMENT CENTRE

The Ivey Energy Policy and Management Centre is the centre of expertise at the Ivey Business School focused on national energy business issues and public policies. It conducts and disseminates first class research on energy policy; and promotes informed debate on public policy in the sector through supporting conferences and workshops that bring together industry, government, academia and other stakeholders in a neutral forum. The Centre draws on leading edge research by Ivey faculty as well as by faculty within Western University.

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From:	Gadi Mayman
To:	Mike Manning; Ronald Kwan; Ken Kandeepan
Cc:	Christina Zhang; Gavin He
Subject:	FW: Rate Mitigation Implementation Meeting - March 30, 2017
Date:	Thursday, March 30, 2017 4:34:10 PM
Attachments:	Action Items_March 30.docx

Different parts of this that each of you may be interested in. If you have any questions after you've read it, please let me know and I can fill in the blanks.

Gadi

From: Katona, Keley (ENERGY) [mailto:Keley.Katona@ontario.ca]
Sent: Thursday, March 30, 2017 4:33 PM
To: Steen Hume (CAB) ; Kaili Sermat-Harding (ENERGY) ; Michael Reid (ENERGY) ; Carolyn Calwell (MCSS) ; Scott Nelms (ENERGY) ; 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com) ; HARTWICK Ken -FINANCE (ken.hartwick@opg.com) ; Rosemaire Leclair ; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca) ; Campbell, Bruce (bruce.campbell@ieso.ca) ; Kim Marshall (Kim.Marshall@ieso.ca) ; Scott Thompson (CAB) ; Helen Angus (MOHLTC) ; Steven Davidson (MTCS) ; 'Martine Band' ; 'CROZZOLI Carlo -CBUSDEV&STRT' ; Gadi Mayman ; LEE John -TREASURY
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Subject: RE: Rate Mitigation Implementation Meeting - March 30, 2017

Good afternoon,
Please find attached the action items from this morning's meeting.
Keley

From: Katona, Keley (ENERGY)
Sent: March-29-17 5:15 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); ''jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com)'; 'HARTWICK Ken -FINANCE (ken.hartwick@opg.com)'; 'Rosemaire Leclair'; 'Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca)'; 'Campbell, Bruce (bruce.campbell@ieso.ca)'; 'Kim Marshall (Kim.Marshall@ieso.ca)'; Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); 'LEE John -TREASURY'
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Subject: Rate Mitigation Implementation Meeting - March 30, 2017

Good afternoon,
Please find attached material for discussion at the weekly rate mitigation implementation working group meeting.
Keley

Keley Katona | Director of Operations
Deputy Minister's Office | Ministry of Energy
Tel: 416-326-7688 | BB: 647-980-4634
E-mail: Keley.Katona@Ontario.ca
4th Floor, Hearst Block, 900 Bay Street

Action Items – Thursday March 30, 2017

1) GA Refinancing
   - ENERGY / Blakes / IESO / OEB / OPG / OPCD to meet on Tuesday to work through issues related to legislation
   - LSB / Blakes to brief OPCD on legislation
   - KPMG / E&Y to continue to be informed so that they can eventually confirm we've met all conditions
   - Blakes / OPG to work through financing issues related to 10% cap
   - Blakes / LSB to work with MAG on a second constitutional law opinion from Peter Hogg
   - TD being engaged through OFA to provide financial advice
   - ESP to make presentation on GA financing at upcoming IESO Board meeting
   - OEB to continue to work with Ministry LSB on comfort letter / OEB doesn't need letter until mid-April
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   - SNAP to review Toronto Hydro issues
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5) Other items
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From:	Ken Kandeepan
To:	Mike Manning; Bonnie Lemcke
Cc:	Christina Zhang
Subject:	FW: Release of 2015-16 Annual Report and Consolidated Financial Statements - Revised Communications Materials
Date:	Monday, October 03, 2016 9:32:25 AM
Attachments:	PA2015 - Media Products - No Opinion w Reg (Oct 3 12 10 am).docx ATT00001.htm

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Pls see attached, pls don't raise this issue until after the public announcement.

Thanks

Ken k

From: Gadi Mayman
Sent: Monday, October 03, 2016 12:24 AM
To: Ken Kandeepan
Cc: Christina Zhang
Subject: Fwd: Release of 2015-16 Annual Report and Consolidated Financial Statements - Revised Communications Materials

Begin forwarded message:

> **From:** "DiMuzio, Sofie (TBS)" <Sofie.DiMuzio@ontario.ca>
> **Date:** October 3, 2016 at 12:17:03 AM EDT
> **To:** "Orencsak, Greg (TBS)" <Greg.Orencsak@ontario.ca>, "Thompson, Scott (MOF)" <Scott.Thompson@ontario.ca>, "Hughes, Karen (TBS)" <Karen.Hughes@ontario.ca>, "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Laughton, Patrick (TBS)" <Patrick.Laughton@ontario.ca>, "MacIntyre, Kyle (TBS)" <Kyle.MacIntyre@ontario.ca>, "McLean, David (MOF)" <David.McLean@ontario.ca>, "Jancik, Mike (TBS)" <Mike.Jancik@ontario.ca>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca>, "Orsini, Steve (CAB)" <Steve.Orsini@ontario.ca>, "Betzner, Lynn (CAB)" <Lynn.Betzner@ontario.ca>, "Tedesco, Lauren (TBS)" <Lauren.Tedesco@ontario.ca>, "Ingram, Kelsey (MOF)" <Kelsey.Ingram@ontario.ca>, "Bromm, William (CAB)" <William.Bromm2@ontario.ca>, "Bevan, Andrew (OPO)" <Andrew.Bevan@ontario.ca>, "Bardeesy, Karim (OPO)" <Karim.Bardeesy@ontario.ca>, "Maddock, Michael (CAB)" <Michael.Maddock@ontario.ca>, "MacKenzie, Rebecca (OPO)" <Rebecca.MacKenzie@ontario.ca>, "McEachern, Gillian (OPO)" <Gillian.McEachern@ontario.ca>, "Killorn, Bill (OPO)" <Bill.Killorn@ontario.ca>, "Mksyartinian, Jacob (OPO)" <Jacob.Mksyartinian@ontario.ca>, "Ostergard, Matt (TBS)" <Matt.Ostergard@ontario.ca>, "Pichelli, Jason (TBS)" <Jason.Pichelli@ontario.ca>, "Farrow, Alicia (CAB)" <Alicia.Farrow@ontario.ca>, "Petsche, Nadine (TBS)" <Nadine.Petsche@ontario.ca>, "Bossin, Bryan (OPO)" <Bryan.Bossin@ontario.ca>
> **Subject: Release of 2015-16 Annual Report and Consolidated Financial Statements - Revised Communications Materials**

Please find attached the revised communications materials incorporating all the latest edits. Qs and As still require a few missing pieces of information and will updated first thing in the morning.
Thank you
Sofie Di Muzio
Director (A), Communications Branch
Treasury Board Secretariat

Treasury Board Secretariat

2015-16 Annual Report and Consolidated Financial Statements Regulatory Amendment, No Opinion

Communications products

Monday, October 03, 2016

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Current holding messaging for Minister Sandals

- As you know, Treasury Board and Ministry of Finance staff prepare the Public Accounts which are subject to independent audit by the Auditor General.

- As I announced to the House last week, there are still some ongoing discussions happening around a complex accounting issue.

- Earlier today I met with the Auditor General and senior ministry officials to discuss the importance of resolving this issue and releasing the 2015-16 Public Accounts.

- Ministry officials will continue to work with the Auditor General and her staff to resolve the outstanding issue over the next several months.

- What I can tell you now is that Ontario is on track to beat its deficit targets and we are committed to balancing the budget in 2017-18.

- Lower than forecast deficit projections confirm that our government's plan to achieve fiscal balance in 2017-18 is working, while we continue to invest in the programs and services that matter to Ontarians.

- Keeping the public informed through transparent financial reporting remains a priority.

- In that spirit, as part of the 2015-16 Annual Report which includes the unaudited Consolidated Financial Statements we have built new data visualization tools to help the public understand Ontario's finances. These tools will be available when our financials are released.

Post technical-briefing speaking points

Minister Sandals' Statement – Release of 2015-16 Financial Statements

Ontario's Annual Report and unaudited Consolidated Financial Statements for 2015-16 show Ontario's deficit is $3.5 billion lower that the $8.5 billion projected in the 2015 Budget, with the province's deficit for 2015-16 at $5 billion.

This is $0.7 billion lower than the $5.7 billion in the 2016 Budget interim projection. As I assured in the House last week, this marks the seventh year in a row that Ontario has beaten its deficit target. We are committed to balancing the budget in 2017-18 and remain balanced in 2018-19.

In preparing the 2015-16 Annual Report and unaudited Consolidated Financial Statements, Treasury Board staff work with their colleagues in ministries across government to assemble financial information for the Annual Report and unaudited Consolidated Financial Statements. The Auditor General, who issues an opinion on the government's adherence to independently established accounting standards, then reviews this.

Earlier today, Minister Sousa and I met with the Auditor General to discuss finalization of the 2015-16 Public Accounts. We did so because this year, the Auditor General the Province' with a new interpretation of public sector accounting standards as related to the accounting treatment of jointly-sponsored pension plans and are subject to a range of interpretations.

Despite our best efforts to try to resolve concerns raised by the Auditor General, the Province's professional accounting staff and the Auditor General continue to have differences of opinion.

The Public Sector Accounting Board has recognized the complexity of this issue and is working with governments across Canada to set an appropriate standard. Ontario will be part of this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

To be clear, Ontario had followed the same pension accounting treatment for the past 14 years. The current Auditor General has accepted this treatment for the last two

years, resulting in unqualified – or clean audit opinions. Three previous Auditors General have also accepted it. There has been no change to the relevant accounting standards over the past 14 years.

In 2016 the C.D. Howe Institute, an independent research organization that assess the fiscal planning and reporting of governments in Canada, also commented positively on the financial reporting practices of Ontario relating to its fiscal reporting activities that include Public Accounts, the annual Budget and Estimates.

To acknowledge the different interpretations and to ensure openness and transparency with respect to province's financial position the government is releasing its financial statements. The government believes it is in the public interest to release its financial information. The government also believes it is in the public interest for the Auditor General to issue an audit opinion on Ontario's finances as soon as possible.

The government regulated the treatment of pension assets in a manner that is consistent with the fiscal outcome proposed by the Auditor General. The impact of the change resulted in an additional $10.7 billion being added to the net debt and accumulated deficit.

Although these financial statements are unaudited, it is important to stress that the Province's financial results show that the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18, and remain balanced in 2018-19.

It is also important to stress that the two pension plans in question – the Ontario Public Service Employees Union Pension Plan and the Ontario Teachers' Pension Plan – are both healthy and well funded.

Based on our respective positions at this time, we believe that this accounting matter would benefit from additional discussions, information and consideration.

Our officials and professional accounting staff will continue to work with the Auditor General's office to resolve this complex accounting issue related to pension assets so that we can table the audited Public Accounts with the Lieutenant Governor in Council as soon as possible.

Minister Sousa's Statement – Ontario's Fiscal Outlook

(TBC input by MOF comms)

The government is dedicated to a fiscally sound approach to managing the Province's finances.

As outlined in the 2016 Budget, the government is committed to eliminating the deficit by 2017-18 and remaining balanced in 2018-19.

The 2016–17 First Quarter Finances also confirmed that the government is projecting a deficit of $4.3 billion in 2016–17, unchanged from the 2016 Budget forecast.

The Ontario economy continues to grow in a challenging global environment. In fact, Ontario posted higher real GDP growth in the first quarter of 2016 than Canada, the United States, and all other G7 countries.

The government's path to a balanced budget is being achieved through responsible fiscal management, which involves:

- Managing growth in program spending, and
- Maintaining the integrity of Provincial revenues.

At the same time, the government continues to make investments in the economy, its people, and a healthy, clean and prosperous low-carbon future.

Key messages – post release

- The government has released its 2015-16 Annual Report and Consolidated Financial Statements to ensure transparency with respect to the province's financial position.

- To align with the Auditor General, statutory authority has been used to regulate the accounting treatment for the 2015-16 financial statements.

- The regulation resolves the outstanding accounting issue for this year in a manner that is consistent with the fiscal outcome proposed by the Auditor General.

- This marks the seventh year in a row that Ontario has beaten its deficit target.

- Ontario remains committed to balancing the budget in 2017-18, while continuing to invest in the priorities that matter to the people of Ontario, such as healthcare, education and infrastructure.

If pressed about why a regulation was needed:

- Based on their professional judgement, public servants could not agree with the Auditor General's interpretation of Public Sector Accounting Standards as it relates to jointly-sponsored pension plans. The regulation was needed to allow civil service accountants to sign off on the Public Accounts without compromising their professional credentials.

- The Province has applied consistent accounting treatment for these plans for the past 14 years, and has consistently received unqualified, or clean audit opinions from the Auditor General, without exception.

- To remain clear and transparent, we have reflected the Auditor General's view of the issue for this year. In order to do so, the government regulated the treatment of the pension assets for 2015-16.

- This is an accounting issue. However we remain optimistic that by studying the issue further and gathering third party professional opinions, we will be able to reach an agreement on the treatment with the Auditor General in the coming months.

News Release

Last Year's Ontario Deficit $3.5 Billion Lower Than Projected
Province Remains Committed to Balance the Budget by 2017-18

News

Ontario's Annual Report and Consolidated Financial Statements for 2015-16 show Ontario's deficit is $3.5 billion lower that the $8.5 billion projected in the 2015 Budget, with the province's deficit for 2015-16 at $5 billion. This is $0.7 billion lower than the $5.7 billion in the 2016 Budget interim projection.

This marks the seventh year in a row that Ontario has beaten its deficit target. Ontario remains committed to balancing the budget in 2017-18 and remain balanced in 2018-19.

In preparing the Annual Report and Consolidated Financial Statements, the Province's professional accounting staff and the Auditor General have engaged in discussions regarding the treatment of pension assets. Pension accounting requires the application of professional judgment. Despite best efforts to resolve concerns, the Province and the Auditor General continue to have differences of opinion about the appropriate application of public sector accounting standards as they relate to pension accounting. This ongoing discussion has delayed the tabling of Province's financial statements.

A regulation is required to allow civil service accountants to sign off on the financial statements without compromising their professional credentials. The Province has filed a time-limited regulation, which legislates the accounting for pension assets of jointly-sponsored pension plans for 2015-16 in a manner that is consistent with the fiscal outcome proposed by the Auditor General.

To acknowledge the different interpretations and to ensure openness and transparency with respect to province's financial position the government is releasing its financial statements.

The statements show the government is beating its deficit targets through sound financial management. The Government of Ontario currently has the lowest program spending per capita among Canadian provinces and ranks the lowest among provinces in terms of public-sector employees per capita. At the same time, Ontario's economy continues to grow. Over the last two years, Ontario's economy has grown by

6.1 per cent. Last year, growth was double the national average. In the first quarter of this year, Ontario's growth was faster than that of the United States and the G7.

Ontario is a recognized leader in financial reporting. The C.D. Howe Institute, an independent research organization that assesses the fiscal planning and reporting of governments in Canada, has commented positively on the financial reporting practices of Ontario, including Public Accounts, the annual Budget and Estimates.

The Public Sector Accounting Board is working with governments across Canada to set an appropriate standard for the treatment of pension assets. Ontario will be part of this national discussion. The Province will also consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

Responsible financial management is part of the government's economic plan to build Ontario up and deliver on its number-one priority to grow the economy and create jobs. The four-part plan includes helping more people get and create the jobs of the future by expanding access to high-quality college and university education. The plan is making the largest infrastructure investment in hospitals, schools, roads, bridges and transit in Ontario's history and is investing in a low-carbon economy driven by innovative, high-growth, export-oriented businesses. The plan is also helping working Ontarians achieve a more secure retirement.

QUOTE

"The Annual Report and Consolidated Financial Statements for 2015-16 show that our government's plan to achieve fiscal balance by 2017-18 is working. We will continue to build on our track record of responsible fiscal management, while investing in vital government services such as health care, education and infrastructure that are important to the people of Ontario."

- Liz Sandals, President of the Treasury Board

"The government is dedicated to a fiscally sound approach to managing the Province's finances. The Ontario economy continues to grow in a challenging global environment. In fact, Ontario posted higher real GDP growth in the first quarter of 2016 than Canada, the United States, and all other G7 countries. The government's path to a balanced budget is being achieved through responsible fiscal management, which involves managing growth in program spending, and maintaining the integrity of Provincial revenues."

- Charles Sousa, Minister of Finance

QUICK FACTS

- The 2015-16 Financial Statements compare Ontario's actual performance to what was planned in the 2015 Budget.

- The Financial Statements are prepared by the Government of Ontario in accordance with legislation and the accounting principles for governments recommended by the Public Sector Accounting Board (PSAB) of the Chartered Professional Accountants of Canada (CPA Canada).

LEARN MORE

- Read the Province's 2015-16 Financial Statements [update hyperlink]
- Explore supplementary information available through new data visualization tools [insert hyperlink]
- Explore the more than 400 open data sets in the Open Data Catalogue
- Learn about the government's fiscal cycle
- Learn about how the government is investing in vital programs and services [insert link to backgrounder]

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Newsroom Backgrounder

Ontario's 2015-16 Financial Statements

The 2015-16 Annual Report and Consolidated Financial Statements show Ontario's deficit is $3.5 billion lower than the $8.5 billion projected in the 2015 Budget, and $0.7 billion lower than the $5.7 billion in the 2016 Budget interim projection.

Accounting Standards

Treasury Board Secretariat prepares the financial statements of Ontario in accordance with the legislation and accounting principles and standards for governments recommended by the Public Sector Accounting Board.

These accounting standards are common, nationally recognized standards used by governments across Canada in their financial reporting.

The Release of Ontario's 2015-16 Financial Statements

The consolidated financial statements are prepared by the Government of Ontario in accordance with legislation and the accounting principles for governments recommended by the Public Sector Accounting Board (PSAB). PSAB independently establishes accounting standards for the public sector in Canada.

PSAB standards specify how transactions and other events are to be recognized, measured, presented and disclosed in a public sector entity's financial statements.

The objective of PSAB standards is to meet the needs of the users of financial statements by providing the information needed for accountability and decision making.

In preparing the Annual Report and Consolidated Financial Statements for 2015-16, professional public servants and the Auditor General engaged in discussions regarding the accounting treatment of pension assets, a topic subject to a range of interpretations.

The Ontario Public Service Employees Union Pension Plan (OPSEUPP) and the Ontario Teachers' Pension Plan (OTPP) are jointly-sponsored pension plans where the Government of Ontario is a co-sponsor.

The assets of OPSEUPP and OTPP are held in trust for the beneficiaries of the plans. The plans are co-managed by the sponsors, and decisions regarding benefits and contributions require negotiation and agreement between them.

During the 2015-16 Public Accounts audit, the Auditor General raised some concerns with regards to Ontario's past accounting practices related to pension assets for the OPSEUPP and OTPP plans.

Pension accounting requires the application of professional judgment. Despite best efforts to try to resolve concerns, the Province's professional accounting staff and the Auditor General continue to have differences of interpretation.

Given the differences in interpretation of the application of PSAB standards for the OTPP and OPSEUPP pension assets, the provincial Cabinet approved a time-limited regulation which legislates the accounting for pension assets of jointly-sponsored pension plans for the 2015-16 Public Accounts. This is consistent with the fiscal outcome proposed by the Auditor General in the last ten days.

The effect of the legislation is to reflect the fiscal impact of the AG's position pending further review and analysis on this accounting matter. The change in accounting treatment is not a reflection on the funding status of the plans, or the quality of financial reporting by the Province. The impact of the change resulted in an additional $10.7 billion being added to the net debt and accumulated deficit.

Prior to this change, Ontario had followed the same pension accounting treatment for all of the past 14 years. This had been accepted by the current Auditor General for the last two years. It has also been accepted by three previous Auditors General. There has been no change to the relevant accounting standards over the past 14 years.

The Auditor General has not provided an audit opinion on the province's financial statements for 2015-16. However the government is releasing these unaudited financial statements to ensure openness and transparency with respect to province's financial position, and because it has passed the deadline to table the Public Accounts with the Lieutenant Governor in Council. The government believes it is in the public interest to release its financial information. The government also believes it is in the public interest for the Auditor General to issue an audit opinion on Ontario's finances so that it can table the Public Accounts with the Lieutenant Governor in Council.

The Public Sector Accounting Board is working with governments across Canada to set an appropriate standard for the treatment of pension assets. Ontario will be part of this

national discussion. Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

Ontario is a recognized leader in financial reporting. The C.D. Howe Institute, an independent research organization that focuses on support for economically sound public policies practices, has acknowledged the consistent basis used by Ontario for its Budget, Estimates and Public Accounts as a best practice to supporting transparency and accountability.

Openness and Transparency

As part of its commitment to Open Government, digital technology was used for the first time to visualize the province's financial information in an interactive and easy to understand way. This year, Ontario is further increasing the openness and transparency of the Annual Report and Consolidated Financial Statements by:

- Creating new data visualizations, including interactive bar charts and interactive data tables.
- Releasing data sets through Ontario's Open Data Catalogue, including data on government organizations, government business enterprises and Trusts.

Improving Outcomes for Ontarians

As the Province's 2015-16 Financial Statements show, the government remains committed to balancing the budget in 2017-18, while continuing to invest in the priorities that matter to the people of Ontario, such as healthcare, education and infrastructure.

Health Care

Building on Ontario's Patient's First: Action Plan, the government continued transforming Ontario's health care system in 2015-16 to become more patient-centred and focused on better access to care, quality and value by:

- Increasing investment in home and community care by five per cent annually: $250 million in 2015-16, for a total of $750 million over three years.

- Increasing the hourly wages of publicly funded personal support workers caring for patients at home and in the community by $1.50 per hour in 2015-16 to at least $15.50 per hour, in the second of three annual increases totalling up to at least $16.50 per hour by April 1, 2016.

- Appointing Ontario's first-ever Patient Ombudsman who will help address needs of patients who have not had their concerns with health care organizations resolved through existing complaint mechanisms.

Advanced Education and Skills Development

In 2015-16, the Ontario government made progress on its plan to help more people get and create the jobs of the future by continuing to invest in student financial assistance and expand access to high quality college and university education.

Over the past 12 years, government investments have resulted in more than double the number of students qualifying for aid, while enrolment has increased by 38 per cent.

In 2015, 67 per cent of adults in Ontario had a postsecondary degree, diploma or certificate – higher than the average of any OECD country.

Childcare, Elementary and Secondary Education

The government has made gains in building and supporting an integrated early-years, elementary and secondary education system. This includes increasing funding for schools and licenced child care, the establishment of the Ontario Early Years Policy Framework and implementation of Full-Day Kindergarten.

In 2015-16, the government built on this success by:

- Increasing wages for early childhood educators and other child care professionals in licensed child care settings by providing a $1 per hour wage increase for eligible child care workers bringing the total wage increase up to $2 per hour, plus benefits.

- Increasing the five-year high school graduation rate to 85.5 per cent – the highest level in the province’s history.

- Doubling the funding for school renewal projects to $500 million in 2015-16 to ensure our students are benefitting from safe, modern and efficient learning environments.

Infrastructure

Ontario is making the largest investment in public infrastructure in the province’s history – about $160 billion over 12 years, starting in 2014-15. Planned investments are supporting over 110,000 jobs, on average, every year across the province.

In 2015-16, the Province continued to invest in hospitals, schools, roads, bridges and transit, including:

- Completing construction of the $1.4 billion Right Honourable Herb Gray Parkway in Windsor–Essex, which provides an express route to the country's busiest land border crossing.

- Ongoing construction of the Eglinton Crosstown Light Rail Transit line, which will offer fast, efficient service and improve travel for commuters.

- Providing small, rural and northern municipalities with funding to build and repair core infrastructure through the Ontario Community Infrastructure Fund.

- Completing the new Humber River Hospital, which offers a comprehensive range of acute care services and support for inpatient and outpatient hospital programs.

Staying on the Path to Balance

The government is working towards a balanced budget through Program Review, Renewal and Transformation (PRRT), a government-wide approach to multi-year planning and budgeting that puts a heightened focus on evidence and outcomes to inform funding allocations.

But PRRT is about more than just savings targets – it is about doing government differently – improving outcomes for Ontarians while freeing up resources to reinvest in key government priorities, such as health care, education and infrastructure.

Examples of successful PRRT initiatives include:

- Improving the sustainability of the Ontario Drug Benefit Program and patients' access to drugs by making the program more efficient and effective. The changes saved approximately $100 million in 2015-16 and will enable over $200 million in savings annually when fully implemented.

- Changing the Second Career program by removing client targets for service providers while ensuring funding support for eligible clients. This change will generate approximately $40 million per year and will allow the government to invest in the Canada-Ontario Jobs Grant and a renewed Ontario Youth Job strategy.

- Reducing the government's office footprint by over 820,000 rentable square feet, which generated approximately $24 million in savings in 2015-16.

- Achieving approximately $56 million in savings through the consolidation of data centres, early vendor payments and lower contract costs – including for software and IT consulting services, laboratory supplies and security services.

- Achieving $7 million in savings from contracts related to government cell phone plans and toll free lines.

The government is also transforming Ontario's student aid system to help thousands of students obtain greater access to advanced education and have lower levels of student debt upon graduation. For students from lower-income and many middle-income families, it would mean free tuition. These changes will start in the 2017-18 academic year.

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Top Media Qs&As

Releasing Unaudited Financial Statements

1. It sounds to me like the government is yet again fighting with the Auditor General. What do you say to this?

This is not true from the government's perspective. And let me explain why: The government respects the oversight and recommendations provided by all independent officers of the Legislative Assembly of Ontario, including the Auditor General. And in this case for this set of final accounts, while one specific issue is being sorted through, we actually are agreeing with the Auditor General's numbers.

Pension accounting requires the application of professional judgment. Despite best efforts to try to resolve concerns, the Province's professional staff and the Auditor General continue to have differences of interpretation

Given these differences of opinion, the Province filed a time-limited regulation, which legislates the accounting for pension assets of jointly-sponsored pension plans for the 2015-16 Public Accounts. The government believes this is consistent with the fiscal outcome proposed by the Auditor General.

We believe that this accounting matter would benefit from additional discussions, information and consideration.

The Public Sector Accounting Board is working with governments across Canada to set an appropriate standard. Ontario will be part of this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

2. Why are you releasing your financial statements without the Auditor approving them?

Earlier today I met with the Auditor General to discuss the 2015-16 Public Accounts. I did so because this year, the Auditor General presented the province with a new

interpretation of public sector accounting standards as it relates to an accounting issue – the treatment of pension assets.

Ontario has followed the same pension accounting treatment for the past 14 years. This had been accepted by the current Auditor General for the last two years, resulting in unqualified – or clean audit opinions. It has also been accepted by three previous Auditors General. There has been no change to the relevant accounting standards over the past 14 years.

In preparing the Annual Report and Consolidated Financial Statements, professional public servants and the Auditor General have engaged in discussions regarding the treatment of pension assets – which is subject to a range of interpretations.

Despite best efforts to try to resolve concerns, the Province and the Auditor General continue to have differences of opinion.

To remain clear and transparent, the government exercised its statutory authority to regulate the treatment of this particular issue for 2015-16. The government regulated the treatment of pension assets in a manner that is consistent with the fiscal outcome proposed by the Auditor General.

The government is now releasing its financial statements to ensure transparency with respect to province's financial position.

The Public Sector Accounting Board is working with governments across Canada to set an appropriate standard. Ontario will be part of this national discussion. Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

3. **If PSAB is studying this issue, are other Canadian jurisdictions dealing with this as well?**

   No other province has similar governance frameworks for their jointly-sponsored pension plans that are in a surplus position.

   Nadine to provide response re BC / New Brunswick

4. **What is the professional judgment that exists out there to interpreting jointly-sponsored pensions?**

Nadine to provide response

5. **Are you saying the Auditor General is misinterpreting PSAB standards?**

   Pension accounting requires the application of professional judgment. Despite best efforts to try to resolve concerns, the Province and the Auditor General continue to have differences of interpretation.
   Nadine to provide response

6. **If the Auditor General had agreed with you, what would the differences have been in the deficit or net debt?**

   If the Auditor General had agreed with us, the province's deficit for 2015-16 would have been $3.5 billion.

7. **The province has been treating pensions the same way since 2001. When did the Auditor tell you about this new accounting treatment?**

   Well into this year's audit, the AG came to a view which she communicated to the Province on September 13.

8. **What does this mean for the Fall Economic Statement?**

   We're in the middle of completing the fiscal plan. We need to account for all financial consideration before we can finalize it. These results will be included as part of that process. **(TBC MOF)**

9. **Is this Public Accounts or not?**

   No. However, the treatment applied is consistent with the fiscal outcome proposed by the Auditor General.

10. **Were you aware of this before the Speech from the Throne? Had you known about this, would that have changed the government's commitments announced in the speech?**

    Response TBC

11. **Why are you doing this today, four days after you announced the delay?**

We wanted to allow the Auditor General time to provide an audit opinion on the Province's financial statements. Given we have not received an opinion, we felt it was in the public interest to release our financial statements in order to be open and transparent.

12. On what exactly do you disagree with the Auditor?

This year, the Auditor General presented the province with a new interpretation of public sector accounting standards as it relates to an accounting issue – the treatment of pension assets.

In preparing the Annual Report and Consolidated Financial Statements, professional public servants and the Auditor General have engaged in discussions regarding the treatment of these pension assets – which is subject to a range of interpretations.

Despite best efforts to try to resolve concerns, the Province and the Auditor General continue to have differences of opinion.

To remain clear and transparent, the government exercised its statutory authority to regulate the treatment of this particular issue for 2015-16. The government regulated the treatment of pension assets in a manner that is consistent with the fiscal outcome proposed by the Auditor General in the last 10 days.

The government is now releasing its financial statements to ensure transparency with respect to province's financial position.

13. If you think you're right, why would you change the numbers?

We are releasing now to ensure transparency about the province's financial position. Our results are consistent with the fiscal outcome proposed by the Auditor General. We also want to be transparent that there is still a disagreement about the treatment of pension assets.

We believe it's in the public that there be no disagreement in order to finalize the numbers. We will continue to work with the Auditor General to resolve this matter.

14. Was there something wrong with the accounting rules that the government was using before?

No.

Prior to this change, Ontario had followed the same pension accounting treatment for the past 14 years. This had been accepted by the current Auditor General for the last two years. It has also been accepted by three previous Auditors General. There has been no change to the relevant accounting standards over the past 14 years.

In 2016 the C.D. Howe Institute, an independent research organization that assess the fiscal planning and reporting of governments in Canada, also commented positively on the financial reporting practices of Ontario relating to its fiscal reporting activities that include Public Accounts, the annual Budget and Estimates.

15. Why hasn't the Auditor General raised this with you in the past two years?

I cannot speak for the Auditor General. Please refer your questions to the Auditor General's Office.

16. What is the government trying to hide by releasing unaudited books?

We are releasing our Financial Statements to ensure openness and transparency with respect to the province's financial position. Our Financial Statements reflect the fiscal outcome proposed by the Auditor General.

Although these statements are unaudited, it's important to stress that the Province's financial results show that the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18, and remaining balanced in 2018-19.

The government is now including five-year trends in its Public Accounts. The increased disclosure and discussion on five-year trends is in line with recommended disclosure practices of the Public Sector Accounting Board. This increased disclosure enhances the quality of financial reporting to the public, Legislature and other users to better meet their transparency and accountability needs.

In addition to the disclosure in the Annual Report, the government is also making available supplementary information through online data visualizations.

17. Are you fudging the books to try and show your finances are better than they really are – is that why the AG won't sign off?

No.

We are releasing our Financial Statements to ensure openness and transparency with respect to the province's financial position. In fact, we have implemented legislation that allows our officials to sign off in a way that is consistent with the fiscal outcome proposed by the Auditor General.

Prior to this change, Ontario had followed the same pension accounting treatment for the past 14 years. This had been accepted by the current Auditor General for the last two years. It has also been accepted by three previous Auditor Generals. There has been no change to the relevant accounting standards over the past 14 years.

Although these statements are unaudited, it's important to stress that the Province's financial results show that the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18 and remaining balanced in 2018-19.

18. Is this even legal – are you in contempt of the house by releasing your financial statements before you table them in the Legislature?

We are not releasing Public Accounts, we are releasing our financial statements to ensure openness and transparency with respect to province's financial position.

The government believes it is in the public interest to release its financial information. The government also believes it is in the public interest for the Auditor General to issue an audit opinion on Ontario's finances so that we can table the Public Accounts with the Lieutenant Governor in Council as soon as possible

TBC Legal

19. Has this ever happened before in Ontario? Anywhere else in Canada?

This has never happened before in Ontario.

TBC Nadine re other experience in Canadian jurisdictions

20. How are we supposed to trust your numbers if the Auditor General hasn't approved them?

We are presenting the numbers that the Auditor General requested.

In the course of developing its 2015-16 financial statements, the Auditor General presented the province with a new interpretation of public sector accounting standards as it relates to the treatment of pension assets.

After careful consideration, the Province filed a time-limited regulation which legislates the accounting for pension assets of jointly-sponsored pension plans for the 2015-16 Public Accounts. The government believes this is consistent with the fiscal outcome proposed by the Auditor General.

This is an accounting issue. In fact, the Public Sector Accounting Board has initiated a project to review it. Ontario will be part of this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

In order to be transparent, and in the public interest, the government is releasing its Financial Statements in order to show the province's financial position.

We believe that this reflects the fiscal outcome proposed by the Auditor General with respect to the treatment of the pension assets in question.

21. So what happens next? When will you table the actual Public Accounts?

The government will continue to work with the Auditor General to expedite the tabling of the 2015-16 Public Accounts.

The Public Sector Accounting Board has initiated a project to review pension accounting standards, and will be seeking input from governments, auditors and other stakeholders to ensure that accounting standards support transparency and accountability and meet user needs. Ontario will participate in this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

22. Does the change in accounting regarding the assets of the Teachers' or OPSEU pensions plans mean those plans might be financially threatened?

Absolutely not. This issue relates solely to the Province's reported financial results and the Province's historical practices of reporting pension assets.

The two pension plans in the Ontario Public Service – which are of the defined benefit type – are healthy and well-funded.

The OPSEU Pension Plan is fully funded with a small reserve of surplus assets standing to the credit of the joint-sponsors, while the Public Service Pension Plan is nearly fully funded at 98%.

Both plans exceeded their target long-term rates of return in 2015. The Public Service Pension Plan achieved a 6.14% return and the OPSEU Pension Plan achieved an 8.0% return.

23. You hired outside experts to give you a third-party accounting opinion, but you paid to get this advice. Didn't they just tell you what you wanted to hear?

TBC OPCD

24. The Auditor General has implied your Provincial Controller is in a position of conflict because she used to work for Deloitte. How do you respond?

All employees that are hired into the Ontario Public Service swear two oaths, an Oath of Allegiance and an Oath of Office. These oaths affirm that public servants will faithfully discharge their duties, and comply with all laws and confidentiality obligations.

25. The Auditor General says she raised this issue with you months ago. Why haven't you fixed this problem by now?

We have been working with the Office of the Auditor General to try to come to an agreement on this issue since it was first raised.

The treatment of pension assets is an accounting issue. In fact, the Public Sector Accounting Board has initiated a project to review pension accounting standards. PSAB will be seeking input from governments, auditors and other stakeholders to

ensure that accounting standards support transparency and accountability and meet user needs. Ontario will participate in this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

In order to be transparent, and in the public interest, the government is releasing its Financial Statements in order to show the province's financial position.

This reflects the fiscal outcome proposed by the Auditor General with respect to the treatment of the pension asset in question.

26. If you say you're open and transparent, why didn't you invite the Auditor General to your media technical briefing?

The technical briefing was for the purposes of updating media and members of the Opposition and the third party. However it was held in a public space in a government building, and anyone was free to attend.

27. Is the government still committed to balancing the budget by 2017-18?

Yes. The Province's financial results show that the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18 and remaining balanced in 2018-19.

28. The financial results show that the net debt and accumulated deficit has ballooned by $10.7 billion? How did this happen and what are you doing to address it?

This year, the Auditor General presented the province with a new fiscal interpretation of public sector accounting standards as it relates to the treatment of pension assets.

After careful consideration, the Province agreed to adopt the Auditor General's fiscal interpretation. The government made a regulatory amendment to allow us to amend our accounting policies for the 2015-16 Public Accounts in order to comply with the Auditor's fiscal interpretation. The impact of the change resulted in an additional $10.7 billion being added to the net debt and accumulated deficit.

Despite this change, and as our results show, the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18, and remaining balanced in 2018-19.

Total debt remains unchanged by the pension adjustment.
The change in the Province's accounting treatment for pension assets of jointly sponsored pension plans, while increasing net debt, has no impact on the Province's borrowing requirements.

29. How can the accumulated deficit and net debt increase by $10.7 billion without causing an increase in total debt?

Total debt is cash based – it is how much money we've borrowed and is owed to our creditors.

Net debt takes into account the difference between our financial assets and liabilities, whether they are cash or not.

The province has changed the valuation of the net pension liability by reducing the pension assets by $10.7 billion, but because there is no cash involved in that valuation, the total debt does not change.

30. Should taxpayers be concerned about the rise in net debt and accumulated deficit?

No.

The Province's financial results show that the government has once again beaten its deficit targets and remains committed to achieving a balanced budget by 2017-18, and remaining balanced in 2018-19.

The treatment of pension assets is an accounting issue. In fact, the Public Sector Accounting Board has initiated a project to review pension accounting standards. PSAB will be seeking input from governments, auditors and other stakeholders to ensure that accounting standards support transparency and accountability and meet user needs. Ontario will participate in this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult

individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

31. How does the Province plan to reduce its net debt-to-GDP ratio to its pre-recession level of 27 per cent?

The first step in returning to the targeted 27 per cent net debt-to-GDP ratio is to balance the budget. Once the budget is balanced, debt will continue to rise by the difference between the annual cash investment in capital and the amortization of these investments. These investments will contribute to the debt rising at a slower rate than the increase in the Province's GDP, over time lowering the net debt-to-GDP ratio to the government's 27 per cent target.

32. What is the difference between "Public Accounts" and "Financial Statements"?

Answer below needs fact check by OPCD

Our financial statements include the Province's annual report and consolidated financial statements. These documents provide financial highlights of the past fiscal year compared to the Budget plan and report on performance in priority areas.

The full Public Accounts would also include these components, as well as a report by the Auditor General containing an audit opinion.
The full Public Accounts will be tabled with the house once the Auditor General's audit opinion is available.

33. You say you're releasing your financial results in the public interest. Aren't you creating confusion by having two sets of books – yours and the AG's?

The government passed a regulation to allow us to amend our accounting policies in order to be consistent with the fiscal outcome proposed by the Auditor General. Therefore there is only one set of books.

Our officials continue to work with the AG's office. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

34. How different will the AG's numbers be?

The government passed a regulation to allow us to amend our accounting policies in order to be consistent with the fiscal outcome proposed by the Auditor General. Therefore there is only one set of books.

Our officials continue to work with the AG's office. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

35. Why didn't you just release Public Accounts last week to meet your legislated timelines?

As stated in the house there will be delay in tabling the Public Accounts because of ongoing discussions with the Auditor General to work through an accounting issue related to pension assets.

Our officials continue to work with the AG's office. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

36. Clearly the government is in a spat with the AG – releasing unaudited financial statements seems like a slap in the face. What does this say about your relationship with the AG?

The government respects the oversight and recommendations provided by all independent officers of the Legislative Assembly of Ontario, including the Auditor General. As a government, we value our important and ongoing relationship with each of these officers.

Our officials continue to work with the AG's office to resolve this accounting issue related to pension assets. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

37. The Auditor General claims you have been using creative accounting to overstate your numbers – how do you respond to that?

That is simply not true.

The government passed a regulation to allow us to amend our accounting policies in order to be consistent with the Auditor's assessment of our treatment of pension assets. This reflects the fiscal outcome proposed by the Auditor General.

Prior to implementing this change, the government had followed the same pension accounting treatment for the past 14 years. This had been accepted by the current

Auditor General for the last two years – resulting in unqualified (clean) audit opinions. It has also been accepted by three previous Auditors General.

There has been no change to the relevant accounting standards over the past 14 years.

38. So at the end of the day if your numbers are the same as the Auditor General's what's the issue?

TBC Nadine

39. What's the difference between "audited" and "unaudited" financial results?

In practice, there should be no difference between audited and unaudited results.

An independent audit of an organization's financial results provides independent assurance that the results fairly represent the financial position of the organization, and that those results are in accordance with generally accepted accounting principles.

The Province's unaudited financial statements include a Statement of Responsibility. This statement describes how the financial report is prepared, and attests to the government's responsibility for the objectivity and integrity of the consolidated financial statements.

The government also attests to its responsibility for maintaining appropriate systems of internal control. The systems support the integrity and completeness of the financial information reported.

40. What's the difference between a "qualified" and "unqualified" audit opinion?

Audit reports represent an auditor's professional opinion on whether an organization's financial position and results of its operations are presented fairly in its financial statements.

An unqualified, or clean opinion, is a judgment that an organization's financial records and statements are fairly and appropriately presented.

A qualified opinion indicates an auditor has concerns with the financial information. Those concerns could include things like the availability of sufficient information for users to make an informed decision, or the organization's reporting in accordance with public sector accounting standards.

In this case the Auditor General has chosen not to issue an opinion at all – either unqualified or qualified.

41. Why didn't the Auditor General issue an audit opinion? Is this even legal?

Despite best efforts to try to resolve concerns, the Province and the Auditor General continue to have differences of opinion.

The government passed a regulation to allow us to amend our accounting policies in order to be consistent with the Auditor's assessment of our numbers. This reflects the fiscal outcome proposed by the Auditor General with respect to the treatment of the pension assets in question.

Our officials continue to work with the Auditor General's office to resolve this accounting issue. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

TBC Legal on question of whether it is legal for AG not to issue an opinion

42. What is a jointly-sponsored pension plan?

The Ontario Public Service Employee's Union Pension Plan (OPSEUPP) and Ontario Teachers' Pension Plan (OTPP) are jointly sponsored pension plans where the Government of Ontario is a co-sponsor.

The assets of both pension plans are held in a trust for the beneficiaries of the plans. The plans are co-managed by the sponsors, and decisions regarding benefits and contributions require negotiation and agreement between both parties.

During the 2015-16 Public Accounts audit, the Auditor General raised some questions about Ontario's past accounting practices related to pension assets for the OPSEUPP and OTPP plans.

Pension accounting is complex and requires the application of professional judgment. Despite best efforts to try to resolve concerns, the Province and the Auditor General continue to have differences of opinion.

43. How does the Auditor General want you to account for jointly-sponsored pension plans?

During the 2015-16 Public Accounts audit, the Auditor General expressed a different interpretation of the existing PSAB standards which would impact the accounting for pension assets of jointly-sponsored pension plans.

The Auditor General's view is that the government does not have legally enforceable right to unilaterally access the assets of these jointly sponsored pension plans. As such, with no agreement in place to the contrary, the Auditor General believes that the pension asset should be removed from the Province's balance sheet.

The government passed a regulation to allow us to amend our accounting policies in order to be consistent with the Auditor's assessment of our numbers. We believe that this reflects the fiscal outcome proposed by the auditor with respect to the treatment of the pension assets in question.

Our officials continue to work with the Auditor General's office to resolve this complex accounting issue. In the meantime, we felt it was in the public interest to release our unaudited financial statements.

General Media Qs&As

44. Is the government artificially balancing the budget through the one-time sale of assets like Hydro One?

The government's plan to eliminate the deficit does not depend on revenues from asset sales. Maximizing the value of these assets is part of the government's economic plan for Ontario. The net revenue gains from these transactions are helping the government to deliver on its plan by investing in infrastructure.

The government is committed to dedicating the net revenue gains from asset optimization activities, including the broadening of ownership of Hydro One and real estate sales to the Trillium Trust which will be used to invest in transit, transportation and other priority infrastructure projects under Moving Ontario Forward.

45. According to your numbers the deficit was down $3.5 billion from the $8.5 billion projected in last year's budget. Where did this money come from?

The improvement over plan was largely due to revenues that were $4.0 billion above the forecast of $124.4 billion.

This reflects higher than expected tax revenue and net revenues from the first phase of broadening Hydro One ownership, and stronger overall performance from government business enterprises. Maximizing the value of these assets is part of the government's economic plan for Ontario.

46. Does the fact that your deficit is $3.5 billion lower than projected mean you have more money to bring to the table in labour negotiations (e.g. doctors)?

It is important to point out that through the Public Accounts process, we are reporting on past performance, whereas labour negotiations impact future fiscal pressures.

Our government is committed to balancing the budget by 2017-18 and remaining balanced in 2018-19. We know we have difficult choices ahead, but people can be assured that their government will take a fair and balanced approach, one that protects and improves the services that matter to Ontarians.

Managing compensation costs is critical to balancing the budget, as over half of government spending goes to salaries and benefits in the Ontario Public Service (OPS) and the broader public sector (BPS).

Compensation costs must be addressed within Ontario's existing fiscal framework and all public-sector partners must continue to work together to control current and future compensation costs.

While continuing to work to achieve fiscal balance by 2017–18, the government is achieving significant results in priority areas for Ontarians.

We know there is more hard work ahead as we work towards a balanced budget, and we are confident that our partners will work with us to build Ontario up.

47. Will you still be able to balance the budget if Ontario's economy does not perform as strongly as you forecast? Even the FAO has said that your forecast is optimistic.

The government is committed to balancing the budget by 2017-18 and remaining balanced in 2018-19.

The Ontario economy continues to grow in a challenging global environment. In fact, Ontario posted higher real GDP growth in the first quarter of 2016 than Canada, the U.S. and all other G7 countries.

While uncertainty in the global economy has increased, along with increased volatility in global financial and currency markets, Ontario has a diversified economy – meaning the Province is well positioned to respond to changing global economic conditions.

With the economy expected to continue to grow, and the Province's ongoing commitment to transform government programs and services, Ontario is well positioned to achieve balance.

48. Are you cutting back on vital services like health care to balance the budget?

No. Through Program Review, Renewal and Transformation (PRRT), we are helping the government achieve better outcomes while also lowering costs.

The primary focus of this transformation is on ensuring that services are delivered

efficiently and in a way that effectively meets Ontarians' needs.

Through cross-ministry horizontal collaboration, we are taking focused action on major transformation and efficiency initiatives that will improve outcomes for Ontarians while helping to free up resources to reinvest in key priorities, such as health care and education.

To improve programs, we are moving towards a focus on evidence-based decision making – gathering and analyzing the best available information to improve how outcomes are identified and achieved across government.

PRRT is about more than just savings targets – it is about doing government differently – improving outcomes for Ontarians while freeing up resources to reinvest in key government priorities, such as health care.

49. This is the seventh year in a row that you have reported a deficit lower than forecast. Are you purposefully overestimating your deficit projections?

The government remains committed to balancing the budget by 2017-18 and is taking deliberate and responsible steps to achieve this goal.

The government recognizes that a fiscally sound approach to managing the Province's finances will provide the foundation for the long-term well-being and prosperity of Ontarians, and protect the public services that Ontarians rely on.

The government's fiscal projections are based on the best economic and fiscal information available at the time. They reflect a realistic and responsible plan to manage the Province's resources, while still protecting the vital services that Ontarians rely on.

Beating our deficit targets helps to keep interest on debt at a manageable level and protects future generations from rising interest costs, which could otherwise crowd out spending on government priorities.

50. You spent $433 million more than you budgeted for programs. How is your government keeping spending in check?

Program Review, Renewal and Transformation (PRRT) is helping the government achieve better outcomes while also lowering costs.

The primary focus of this transformation is on ensuring that services are delivered efficiently and in a way that effectively meets Ontarians' needs.

Through cross-ministry horizontal collaboration, we are taking focused action on major transformation and efficiency initiatives that will improve outcomes for Ontarians while helping to free up resources to reinvest in key priorities, such as health care and education, and by retaining the lowest per capita program spending in Canada.

51. How would the Ontario Rebate for Electricity Consumers impact Ontario's plans for a balanced budget? How will the province pay for this $1 billion rebate?

We have incorporated that expenditure into our fiscal plan starting in 2017. The government remains committed to balancing the budget by 2017-18 and remaining balanced in 2018-19 by continuing to invest in the economy, our people and a healthy, clean and prosperous low-carbon future. These investments will help enhance the public services that Ontarians rely on, as well as stimulate economic growth.

Questions related to the Ontario Rebate for Electricity Consumers should be referred to my colleague, the Minister of Energy.

52. How is the money spent on the now defunct Ontario Retirement Pension Plan reflected in Public Accounts? How does the government justify this expense?

TBC OPCD + MOF

53. Was the delay in tabling Public Accounts because you can't afford the childcare commitment and the electricity rebate?

No. Public Accounts is a retrospective document that compares Ontario's actual performance to what was planned in the Budget.

I have directed senior Treasury Board officials to work with the Office of the Auditor General to develop a plan and finalize the Public Accounts as soon as possible.

54. In 2003, your government brought in legislated timelines for Public Accounts, yet you're past the deadline and you still haven't tabled them. Why didn't you adhere to your own legislation?

We have been working with the Office of the Auditor General to try to come to an agreement on the treatment of pension assets.

The Public Sector Accounting Board has initiated a project to review pension accounting standards, and will be seeking input from governments, auditors and other stakeholders to ensure that accounting standards support transparency and accountability and meet user needs. Ontario will participate in this national discussion.

Ontario will also be engaging the expert accounting community to support a full understanding of the basis and nature of the differences. The Province will consult individuals with a range of backgrounds and experience, including preparers, joint sponsors and auditors of public sector financial reports.

In order to be transparent, and in the public interest, the government is releasing its Financial Statements in order to show the province's financial position.

We believe that this reflects the fiscal outcome proposed by the auditor with respect to the treatment of the pension asset in question.

55. Disagreement with officers of the legislature seems to be a recurring theme – at least with the AG – what's your position on this? Does this government have a problem with officers of the legislature?

The government respects the oversight and recommendations provided by all independent officers of the Legislative Assembly of Ontario, including the Auditor General. As a government, we value our important and ongoing relationship with each of these officers.

56. Is the fact that you've changed your accounting standards an indication of financial mismanagement on the part of government?

No. The Province's financial results show that the government has once again beaten its deficit targets and is on track for a balanced budget by 2017-18 and remaining balanced in 2018-19.

Prior to implementing this change, the government had followed the same pension accounting treatment for the past 14 years. This had been accepted by the current Auditor General for the last two years. It has also been accepted by three previous

Auditors General. There has been no change to the relevant accounting standards over the past 14 years.

For 2015-16 financial statements, the government legislated its accounting treatment for pension assets of its jointly-sponsored pension plans.

57. Are you concerned about how the credit rating agencies will view this issue?

The Province's financial results show that the government has once again beaten its deficit targets and remains on track for a balanced budget by 2017-18 and remaining balanced in 2018-19.

Our government remains committed to balancing the budget in 2017-18. At the same time, we will continue to invest in vital government services, such as health care, education and infrastructure that are important to the people of Ontario.

In 2016 the C.D. Howe Institute, an independent research organization that assess the fiscal planning and reporting of governments in Canada, also commented positively on the financial reporting practices of Ontario relating to its fiscal reporting activities that include Public Accounts, the annual Budget and Estimates.

58. Can credit rating agencies adjust their ratings based on this new development? What about bondholders?

The government remains committed to balancing the budget by 2017-18.

The deficit for 2015-16 is $5 billion, a $3.5 billion improvement compared to the 2015 Budget. The deficit is also a $0.7 billion improvement compared to the interim results for 2015-16 contained in the 2016 Budget, which formed the basis for three rating agencies to confirm the Province's credit rating, and the fourth to improve their assessment of the Province's credit outlook.

This marks the seventh year in a row that Ontario has beaten its annual deficit target, reflecting the government's responsible and balanced approach to fiscal management.

The rating agencies and bondholders will understand that the change in the Province's accounting treatment for pension assets of jointly-sponsored pension plans, while increasing net debt, has no impact on the Province's borrowing requirements or total debt outstanding.

Hydro One

59. Why are you selling off Hydro One?

The government is broadening the ownership in Hydro One to improve the company's long-term performance and unlock billions in value for investment in major infrastructure projects that will help grow Ontario's economy for years to come.

This approach will create an improved company that would operate more efficiently and better serve the interests of ratepayers and customers of Hydro One.

The net revenue gains from broadening the ownership of Hydro One shares will provide the government with approximately $4 billion to be credited to the Trillium Trust to invest in key infrastructure and create thousands of jobs, as well as $5 billion to reduce debt.

60. What is the Hydro One deferred tax benefit?

As a result of Hydro One exiting the Payment in Lieu (PILs) regime and the revaluation of its fixed assets upon entering the corporate tax regime, the company recognized a deferred tax benefit in fiscal 2015-16, which positively affected its net income.

At consolidation in Public Accounts of the Province's portion of Hydro One's net income, Hydro One's recognition of a deferred tax benefit increased the Province's revenues by $2.4 billion. The gain associated with Deferred Tax Benefit from the IPO has been allocated to the Trillium Trust.

61. Why did you loan the electricity unions money to buy shares of Hydro One?

In connection with the IPO, the Province sold $116 million worth of Hydro One shares to trusts of the Power Workers' Union (PWU) and the Society of Energy Professionals (SEP) trusts. Of the shares sold to the Trusts, about $108 million was purchased using loans provided by the Province. The gains from those share sales will be credited to the Trillium Trust over time as the loans are repaid.

The government is fully committed to dedicating net revenue gains from the sale of designated assets to the Trillium Trust to help fund further investments in transit, transportation and other priority infrastructure as part of Moving Ontario Forward.

The $3.2 billion being credited to the Trust at this time does not include amounts associated with shares purchased by the Power Workers' Union (PWU) and the Society of Energy Professionals (SEP) trusts using loans provided by the Province.

62. The government is being sued over the sale of Hydro One. Was the sale worth it to balance you budget now that you're being sued?

I understand Ontario has been served with a notice of claim. As this matter may be subject to litigation, it would be inappropriate to comment further.

63. The FAO has warned that the partial sale of Hydro One will have direct implications on the provinces debt and ability to balance the budget. What do you say to these concerns?

To date, Ontario has sold approximately 30 per cent, or about half of the 60 per cent of shares the government intends to sell, and with this $3.2 billion credited to the Trillium Trust is well on track to meet its multi-year asset optimization target to generate $5.7 billion over time to support investments in infrastructure.

Crediting the $3.2 billion to the Trillium Trust demonstrates Ontario's commitment to investing in infrastructure projects that help stimulate economic growth and create good, well-paying jobs.

The government acknowledges the important role played by the FAO in providing independent analysis to the Assembly on the state of the Province's finances.

Bargaining and Compensation

64. What is the government doing to control executive compensation in the Broader Public Sector?

In March 2015, the government proclaimed the Broader Public Sector Executive Compensation Act, 2014 (BPSECA) into force. This legislation allows the government to establish compensation frameworks for designated senior executives in the broader public sector.

An Executive Compensation Framework came into force on September 6, 2016. The framework reinforces that designated BPS employers are accountable for compensation decisions, sets caps and prohibitions on certain types of compensation, requires enhanced public transparency and allows impacted employers to balance the need to attract the necessary talent to deliver high quality public services while managing public dollars responsibly.

The framework applies to all designated employers under BPSECA, including hospitals, school boards, colleges and universities, community care access corporations, provincial agencies and named hydro entities.

The framework caps salary and performance-related payments for designated executives at no more than the 50th percentile of appropriate comparators and prohibits elements like signing bonuses and pay in lieu of perquisites.

The framework also requires that each designated employer engage in public consultation on their compensation program before it is finalized and requires final programs to be posted on the designated employer's website. These requirements enhance transparency and give Ontarians the opportunity to provide input on executive compensation in the BPS.

BPSECA includes significant compliance and enforcement measures: employers will be required to complete reports concerning compliance with the framework and individuals could be subject to penalties if they willfully fail to provide a report, provide a false report or obstruct an auditor.

65. How are you managing the costs of public sector compensation?

Managing compensation costs is critical to balancing the budget, as more than half of government spending goes to salaries and benefits, including those of both the Ontario Public Service (OPS) and broader public sector (BPS). All public-sector partners must continue to work together to control current and future compensation costs.

Since July 2012, the average annual negotiated wage increase across Ontario's provincial public sector has been 0.6 per cent. This is lower than:

- Ontario's municipal public sector (1.7 per cent)
- the federal public sector in Ontario (1.7 per cent)

- Ontario's private sector (1.9 per cent)

66. Where is the agreement with OPSEU reported in Public Accounts? Was this truly net-zero?

The agreement reached with OPSEU's Central and Unified bargaining units on October 30, 2015 is net-zero and remains consistent with the fiscal plan outlined in both the 2014 and 2015 Budgets.

To achieve a net-zero outcome, there are no wage increases in 2015 and 2016. In 2016 there will be a modest 1.4% one-time lump sum payment that does not form part of employees' base salaries, and in 2017 there is a 1.4% pay increase. Both are offset through changes to employee benefits and entitlements over the three-year term of the contract, including a freeze on salary progression in 2016 and 2017 and capping of termination payments.

This agreement will support the government's ongoing efforts to eliminate the deficit while protecting the valued public services Ontario families rely on.

67. The Premier recently said the era of net zero is over. How will this affect labour negotiations?

As a government, we'll continue to do what we've always done in terms of negotiations. As the time comes to negotiate new contracts, whether it's Treasury Board Secretariat that's negotiating or an individual ministry, they always come to Treasury Board to get an approved mandate. So we'll carry on with that practice of coming to Treasury Board for an approved mandate that will fit within the fiscal plan.

Ontario's Financial Position

68. The FAO has warned that if Ontario's fiscal position deteriorates beyond 2017-18, the four international credit rating agencies could lower Ontario's credit rating, which could lead to higher borrowing costs and more challenging fiscal position. What is the government doing to manage the debt?

The government remains firmly committed to balancing the budget by 2017–18.

The deficit for 2015-16 is $5 billion, a $3.5 billion improvement compared to the 2015 Budget. This marks the seventh year in a row that Ontario has beaten its annual

deficit target, reflecting the government's responsible and balanced approach to fiscal management.

Given ongoing challenges in the broader economic environment, the government recognizes that now is the time to be making investments in people, modern infrastructure and a dynamic and innovative business climate — investments that will help to spur economic growth and create the new jobs necessary to support eliminating the deficit.

Alongside these strategic investments, the government is also taking deliberate actions to ensure it can continue to manage spending and improve outcomes for Ontarians. Together, these investments and deliberate actions will help ensure that the priority programs and services that people rely on are maintained and enhanced while the deficit is eliminated.

69. Some have said your government has a spending problem, not a revenue problem. As the largest subnational borrower, what do you say to that?

The government beat its deficit target for the seventh year in a row. Last fiscal year's deficit is $5 billion, down $3.5 billion from the $8.5 billion projected in last year's budget.

The government is projecting a deficit of $4.3 billion in 2016-17 and a return to a balanced budget in 2017-18.

The improvement over plan was due in large part to the Ontario government's strong focus on managing growth in spending. Ontario consistently has the lowest per capita program spending among all Canadian provinces.

Over the past four years the Province has held the average annual growth in program spending to 1.9 per cent, less than the rate of inflation, while investing in services that people rely on.

Key elements of the government's plan to eliminate the deficit are:

- Program Review, Renewal and Transformation
- managing compensation costs
- maintaining tax fairness and a level playing field for business
- strengthening government transparency, financial management and fiscal accountability

70. How much did government spend in 2015-16?

TBC OPCD

71. Why was total expense $300 million higher than projected in the 2015 Budget plan?

Total expense in 2015–16 was $133.4 billion, $1.5 billion higher than the 2015 Budget plan. Program spending was $122.4 billion, up by $1.9 billion from a planned spending of $120.5 billion.

The increase largely reflects the government's decision, announced in the 2015 Ontario Economic Outlook and Fiscal Review, to invest $0.3 billion through the new Green Investment Fund. As well, spending in the health, children's and social services, justice sectors and other programs was higher than planned.

Total program spending was $1.9 billion higher than the Budget, resulting in actual program expense of $122.4 billion. The increases were attributable to:

- $1.5 billion pension asset valuation allowance for OTPP and OPSEU.
- Health sector expense was $294 million, or about 0.6 per cent, above plan. Higher spending resulted from increased drug costs as well as higher hospital sector expense, partially offset by underspending in agencies.
- Children's and social services sector expense that was $124 million higher than planned, due mainly to additional spending to address demand for the Ontario Disability Support Program and the cost of prescription drugs for social assistance recipients.
- Justice sector expense increased by $120 million, mainly due to settlements under the Proceedings Against the Crown Act and higher-than expected bad debt provisions related to unpaid fines.
- Other programs expense was $628 million higher than expected. The increase was due to one-time investments through the Green Investment Fund, higher than anticipated expense for the Ontario Production Services Tax Credit and costs related to the Hydro One IPO.

Increases in these sectors and programs were offset by:

- Education sector expense was $233 million lower than expected, due in part to a higher share of funding spent on capital projects that are capitalized and amortized instead of expensed, higher-than-forecasted revenues from education development charges, and slightly lower-than-projected enrolment.

- Post-secondary and training sector expense was $176 million lower than expected, mainly due to lower spending on post-secondary operating grants and lower student financial assistance as a result of lower-than-forecast enrolment. As well, spending on employment and training programs was below plan, partially offset by higher expense on tax credits to employers to support training.

72. What are you going to do if Ontario's economy does not perform as strongly as you forecast?

The Province has included prudence as part of the fiscal plan to help ensure it meets future fiscal targets as it moves towards a balanced budget in 2017–18.

As required by the Fiscal Transparency and Accountability Act, 2004 (FTAA), the fiscal plan continues to incorporate prudence in the form of a reserve to protect the fiscal outlook against adverse changes in the Province's revenue and expense, including those resulting from changes in Ontario's economic performance. The reserve has been set at $1.0 billion in 2016–17, and $1.2 billion in each of 2018–19.

The fiscal plan also includes contingency funds to help mitigate expense risks that may otherwise negatively impact Ontario's fiscal performance.

In keeping with sound fiscal practices, the Province's revenue outlook is based on prudent economic assumptions. The Ontario Economic Forecast Council, established under the FTAA, reviewed the Ministry of Finance's economic assumptions in February 2015. All council members found the assumptions to be reasonable.

73. What if interest rates go up? What affect would higher interest rates have on debt?

The Province is operating under a historically low interest rate environment, however, if interest rates did increase, a one percentage point change will result in an impact of approximately $350 million to the Province's interest expense.

74. What is the government's annual borrowing program?

The amount of money the government borrows varies from year to year and is dependent on the deficit, proposed investments in capital and amount of debt that is maturing.

Over the three years 2016-17 to 2018-19 average long term public borrowings are estimated to be $26 billion per annum, considerably lower than what the Government borrowed over the past three years which averaged at $33 billion per annum. The lower borrowings are primarily due to the Government's efforts in reducing the deficit and balancing in 2017-18.

75. Did you use your reserve fund to pad your fiscal results and pay down the debt?

For planning purposes, a reserve is included in the budgeted surplus/deficit each year to guard against unforeseen revenue and expense changes that could have a negative impact on the Province's fiscal performance. The 2015 Budget plan included a $1.0 billion reserve. Without the reserve, the actual deficit result of $5.0 billion would not have been affected.

Budget Surplus and Revenue Increase

76. Can you explain the $4.0 billion increase in revenue since your 2015 Budget?

The increase in revenues primarily reflects stronger-than-projected 2015 personal income tax assessments and a strong Ontario housing market in 2015 which boosted Sales Tax and Land Transfer Tax revenues.

Taxation revenues also reflected a one-time increase in Electricity payments-in-lieu of taxes related to Hydro One ownership broadening in 2015-16.

77. How did net income from government business enterprises increase by $100 million from your 2015 Budget projection?

This increase was mostly attributable to combined higher net income from the Liquor Board of Ontario (LCBO), Ontario Lottery and Gaming Corporation (OLG) and Ontario Power Generation Inc. (OPG).

Higher net income from these business enterprises, however, was partially offset by lower net income from Hydro One, primarily reflecting impacts from broadening Hydro One ownership.

Contingency Fund / Reserve

78. What is the difference between the contingency fund and the reserve?

The contingency fund is an amount of expense that is approved by the Legislative Assembly at the beginning of the year to cover expenses due to unforeseen events (e.g. fighting forest fires). This approved spending limit is allocated during the year to ministries for their programs and activities.

The reserve is an amount included in the forecast each year to protect the plan against unforeseen revenue and expense changes that could have a negative impact on the Province's fiscal performance.

Budget Projections vs. Public Accounts Reporting

79. What accounts for the $4.4 billion increase in taxation revenues from your 2015 Budget projection?

The increase in revenues primarily reflects stronger-than-projected 2015 personal income tax assessments and a strong Ontario housing market in 2015 which boosted Sales Tax and Land Transfer Tax revenues.

Taxation revenues also reflected a one-time increase in Electricity payments-in-lieu of taxes related to Hydro One ownership broadening in 2015-16.

80. Why did Ontario's net debt increase by $20.6 billion in 2015-16?

Net debt is the Province's total debt and other liabilities, less its financial assets, including cash and investments. The increase was primarily due to a $10.9 billion increase in liability and a $10.7 billion pension accounting adjustment, which was primarily offset by a $1.0 billion increase in financial assets.

81. How do you explain the $12.4 billion increase in total debt in 2015-16?

The increase of $12.4 billion in total debt is due to borrowing for the deficit and investments in capital assets for 2015-16. It also includes pre-borrowing of $2 billion to take advantage of low interest rates and continuing demand for the Province's Debt.

82. Why is the government now including 5-year trends in the Public Accounts?

The increased disclosure and discussion on 5-year trends is in line with recommended disclosure practices of the Public Sector Accounting Board. This increased disclosure enhances the quality of financial reporting to the public, Legislature and other users to better meet their transparency and accountability needs. In addition to the disclosure in the Annual Report, the government is also making available supplementary information through data visualization.

83. Why is the interest on debt for 2015-16 $400 million lower than forecast in the 2015 Budget?

Interest on debt expense was $0.4 billion below plan in 2015-16, as a result mainly of lower-than-forecast interest rates, the lower-than-planned deficit and cost effective borrowing and debt management.

84. Why is interest on debt for 2015-16 $400 million higher than in 2014-15?

Interest of debt is higher by $332 million from last year, mainly due to the funding of the deficit and investment in capital assets and partly offset by the impact of lower interest rates.

Program, Review, Renewal and Transformation

85. How are you reviewing and transforming government programs?

Program Review, Renewal and Transformation (PRRT) is helping the government achieve better outcomes while also lowering costs.

The primary focus of this transformation is on ensuring that services are delivered efficiently and in a way that effectively meets Ontarians' needs.

Through cross-ministry horizontal collaboration, we are taking focused action on major transformation and efficiency initiatives that will improve outcomes for Ontarians while helping to free up resources to reinvest in key priorities, such as health care and education.

To improve programs, we are moving towards a focus on evidence-based decision making – gathering and analyzing the best available information to improve how outcomes are identified and achieved across government.

86. Has PRRT achieved any tangible results/savings?

The government has achieved a number of efficiencies to make programs more sustainable, such as negotiating lower prices for goods and services and managing compensation.

But PRRT is about more than saving money — it is a continuous planning approach focused on improving outcomes for government programs and services to ensure they are effective, efficient, relevant and sustainable.

87. What do you have to say to those public sector workers who have lost their jobs or are at risk of losing their jobs because of PRRT?

Program Review, Renewal and Transformation (PRRT) is helping the government achieve better outcomes while also lowering costs.

The primary focus of this transformation is on ensuring that services are delivered efficiently and in a way that effectively meets Ontarians' needs.

Government Assets

88. What is the government doing to extract value from any government assets?

With the 2014 Budget, the government began the process of unlocking the economic value of the Province's assets, including setting up the Premier's Advisory Council on Government Assets, chaired by Ed Clark, former Group President and Chief Executive Officer of TD Bank Group.

The council delivered recommendations on the electricity sector to the Province in advance of the 2015 Budget, including broadening the ownership of Hydro One. This would involve an initial public offering of about 15 per cent of the voting securities in Hydro One, with additional share sales in subsequent years. Over time, share offerings would total up to 60 per cent of the voting securities in Hydro One.

The Province is also moving forward with its plans to unlock value from its real estate assets, including OPG's head office building, and the Seaton and Lakeview lands. In June 2016, the Province closed the sale for the Liquor Control Board of Ontario's (LCBO) head office lands, raising $260 million in gross proceeds.

All net revenue gains from the sale of qualifying assets will be dedicated to the Trillium Trust to help fund further investments in transit, transportation and other priority infrastructure as part of the Moving Ontario Forward initiative.

Trillium Trust

89. Have the net proceeds from the sale of the GM holdings and the partial sale of Hydro One been dedicated to the Trillium Trust, and how is that being reported in Public Accounts?

The Trillium Trust Act, 2014, provides for the dedication of net revenue gains from the sale of qualifying assets to help support key infrastructure priorities, such as roads, bridges and public transit. A schedule in Volume 1 of the Public Accounts reports on the financial activities of the Trillium Trust.

Volume 1 shows that $1.35 billion was available for the Trillium Trust at March 31, 2016, to help fund investments. This reflects the sale and redemption of the Province's shares in General Motors in earlier years.

In August 2016, a regulation was put in place that credited the trust with $3.2 billion from the net revenue gains resulting from the Hydro One IPO, the gain on sale of shares in November 2015 and the share of the deferred tax benefit to Hydro One that has been recognized by Ontario through its share of Hydro One net income as a result of its ownership position in Hydro One.

The net revenue gains from the secondary offering in April 2016 will be reported in the 2016-17 Public Accounts and credited to the Trillium Trust.

90. How have you spent the funds dedicated to the Trillium Trust?

As announced in the 2016 Budget, the government plans to begin drawing on the balance in the Trillium Trust in 2016-17 to support the largest investment in public infrastructure in Ontario's history.

Based on planned expenditures, in 2016–17 the Trillium Trust would support Moving Ontario Forward initiatives, such as GO Transit Regional Express Rail, Hurontario Light Rail Transit and the Ontario Community Infrastructure Fund.

91. Why are you allocating non-cash items like the deferred tax asset generated in the Hydro One transaction to the Trillium Trust?

TBC OPCD

Moving Ontario Forward

92. In the 2015 Budget, the government stated that $3.5 billion would be dedicated to the Moving Ontario Forward plan. So far, only $1.35 billion has been dedicated to the Trillium Trust. How do you propose to supply the $2.15 billion difference?

Moving Ontario Forward dedicated funds would be largely supported by:

- Dedicated proceeds from 7.5 cents of the existing provincial gasoline tax to public transit and transportation infrastructure priorities. This would be over and above the existing gas tax funding to municipalities, with no increase to the current tax rate.

- Repurposing revenues from the existing Harmonized Sales Tax charged on the current provincial taxes on gasoline and road diesel.

- Dedicated proceeds from targeted revenue measures.

- The government's asset optimization strategy, with net revenue gains dedicated to the Trillium Trust to help support investments in public infrastructure.

- Working with the federal government to secure federal funding through the Building Canada Plan.

93. How much did the government spend on Moving Ontario Forward in 2015-16?

Moving Ontario Forward is part of the government's commitment to invest more than $137 billion in public infrastructure over the next 10 years. Investments are underway, including providing $100 million per year to small, rural and northern municipalities through the Ontario Community Infrastructure Fund to build and repair critical infrastructure.

Like most large infrastructure investments, initial spending on Moving Ontario Forward projects is focused on planning, design, property acquisition and other activities to get projects construction-ready. Spending would ramp up significantly once this preliminary work is completed and construction activity is underway. Over the 10-year Moving Ontario Forward period, all of the dedicated funds are expected to be spent on priority infrastructure projects.

94. Why aren't the additional $2.2 billion in revenues dedicated to the Moving Ontario Forward plan reported in the Public Accounts?

In the 2015 Budget, the government committed to dedicate $31.5B over 10 years to support infrastructure projects under the Moving Ontario Forward plan, which included $5.7B from its asset optimization strategy. In 2014-15, this amounts to about $3.5B in dedicated funds including $1.3B from asset optimization. The remaining $2.2B in 2014-15 would be largely supported by:

- Dedicated proceeds from 7.5 cents of the existing provincial gasoline tax to public transit and transportation infrastructure priorities. This would be over and above the existing gas tax funding to municipalities, with no increase to the current tax rate.

- Repurposing revenues from the existing Harmonized Sales Tax charged on the current provincial taxes on gasoline and road diesel.

- Dedicated proceeds from targeted revenue measures.

- Working with the federal government to secure federal funding through the Building Canada Plan.

These additional amounts are largely taxation revenues and are reflected in the total revenue figures in the 2014-15 Public Accounts.

95. How does investing in public infrastructure impact the economy?

A large and growing body of independent research shows that infrastructure investments support jobs, augment personal incomes and produce real growth in the economy. For example, a September 2015 report by the Broadbent Institute and the Centre for Spatial Economics showed that, on average, investing a dollar in public infrastructure in Canada raises gross domestic product (GDP) by $1.43 in the short term and up to $3.83 in the long term.

The Province's planned investments in infrastructure are expected to support over 110,000 jobs, on average, each year.

96. The Public Accounts makes reference that the Province's investment in capital assets is guided by sound asset management planning principles, so why is the education sector facing large renewal needs?

The Province has announced new renewal investment, including: increased investments in GO Transit rehabilitation and renewal; additional annual funding of $50 million to assist hospitals in maintaining their facilities in good repair; and a $1.1 billion investment to repair and renew schools across the province (allocated to school boards in proportion to their renewal needs).

In the education sector, the School Condition Improvement program addresses renewal needs focusing on ensuring that facilities are in good condition, energy efficient and accessible and meet modern service standards. The funding will enable school boards to repair roofs, update HVAC units and modernize electrical and plumbing systems. It will also significantly improve more visible elements of schools that impact students' learning and well-being, including flooring, walls, ceilings, playing fields and more. To support transparency, the government has also released detailed information regarding the condition and renewal needs of each of Ontario's publicly funded schools.

Transparency

97. You say the Province's Annual Report is a central element in demonstrating transparency in reporting financial activities and accountability, yet the FAO continues to criticize your government for withholding information. What do you say to these criticisms?

The relationship between the FAO's office and our government is very important.

Our door is open to meet with the FAO and his staff upon request, and our government has tried to be proactive in reaching out to provide clarification when it could be of use.

We want to be accommodating and helpful, while also respecting the requirements of the 2013 FAO Act. With this in mind, Treasury Board has provided additional information to complement and/or further clarify our responses to the FAO when we've received follow-up requests from his office.

We have also reformatted information into machine-readable charts upon request, when it was possible and consistent with legislation. All requests from the FAO office to the Treasury Board Secretariat have been responded to.

Pan Am Games

98. How much was spent on the games, where does it appear in Public Accounts? And how does your government justify this expense?

These were the largest, most successful Pan/Parapan Am Games ever – creating 26,000 jobs, boosting Ontario's GDP by $3.7B and leaving a lasting legacy that will benefit Ontario for years to come. The economic boost that resulted from the Games acted as a catalyst for economic, social, infrastructure and athletic development and we were proud to host these Games.

Questions related to the Pan Am Games should be referred to my colleague, the Minister of Tourism, Culture and Sport.

Underground Economy

99. How are you ensuring revenue integrity?

A fair and efficient tax system is critical to sustaining public services. The 2014 Budget noted that when businesses aggressively avoid or evade paying taxes, everyone else is left to make up the shortfall, putting the competitiveness of legitimate businesses at risk.

Since 2013–14, the Province has taken concrete measures to help ensure tax fairness and a level playing field for business. These include enhanced auditing and compliance activities, such as a multi-year agreement with the Canada Revenue Agency to address the underground economy and corporate tax avoidance in Ontario. The Province has also targeted areas at high risk of underground economic activity with pilot initiatives that focus on mitigating unfair and unsafe circumstances for Ontario's workers and consumers.

In total, these efforts have generated an estimated $1.1 billion for Ontario to date. The Province will build on these successful initiatives with new approaches to ensuring revenue integrity.

Ontario.ca landing page

Ontario's unaudited 2015-16 Annual Report

The Annual Report looks back at the government's revenues and expenses. It compares and explains the province's financial performance with the goals outlined in the budget.

Overview

The unaudited 2015-16 Annual Report presents the government's financial statements and provides a picture of how finances were managed over the last fiscal year (April 1 to March 31).

The unaudited Annual Report is made up of:

- a financial statement, discussion and analysis
- consolidated financial statements
- three supporting volumes

As part of our Open Government initiative, you can find additional tools, features and tables to make the government's financial information easier to access, use and understand.

Financial statement, discussion and analysis

The financial statement, discussion and analysis is a high-level summary of the fiscal year's results. It includes financial statements, analyzes the state of the province's finances and outlines achievements for the fiscal year.

Read the financial statement, discussion and analysis (2015-16) <insert link>

See the government's five-year trends <insert link>

Unaudited Consolidated financial statements

These statements compare government revenues to its expenses (the cost of providing programs and services and financing debt). The result is the annual surplus or deficit. These statements also display the budget plan and last year's numbers for comparison.

Read the consolidated financial statements (2015-16) <insert link>

Volume 1: ministry statements and schedules (unaudited)

Volume 1 contains ministry statements, detailed schedules of debt and other items. This volume details where government revenue comes from, including taxes, non-tax revenue and income from enterprises (such as the LCBO), alongside the expenses of ministries.

Read Volume 1 (2015-16) <insert link>

This graphic visualizes ministry spending information in Volume 1 of the unaudited 2015-16 Annual Report, not including financial reimbursements or recoveries. Financial reimbursements or recoveries include internal chargebacks between ministries for shared services, as well as reimbursements from external sources for the delivery of services. As a result, some amounts may differ from those in the unaudited Annual Report.

[data tree map visualization]

Select a ministry to learn more about their spending. You can also download the 2015-16 Annual Report data to create your own visualization.

Get Volume 1 data <insert link>

Volume 2: financial statements of government organizations and business enterprises

Volume 2 contains the individual financial statements of government organizations, business enterprises and other financial statements. These organizations and enterprises include agencies, such as Metrolinx and Hydro One, and organizations like the Workplace Safety and Insurance Board.

Read Volume 2 (2015-16) <insert link>

Volume 3: detailed schedules of payments (unaudited)

Volume 3 contains the transfer payments made by ministries to recipients that are not a part of the Government of Ontario, such as hospitals, community agencies and schools. It also includes payments to vendors for goods and services, such as third-party staffing agencies, consultants and telecom providers.

Read Volume 3 (2015-16) <insert link>

2015-16 Annual Report: financial statement, discussion and analysis

The financial statement, discussion and analysis is a high-level summary of the fiscal year's results. It includes financial statements, analyzes the state of the province's finances and outlines achievements for the fiscal year.

See the government's five-year trends <insert link>

2015-16 Annual Report: unaudited consolidated financial statements

These statements compare government revenues to its expenses (the cost of providing programs and services and financing debt). The result is the annual surplus or deficit. These statements also display the budget plan and last year's numbers for comparison.

Read the consolidated financial statements (2015-16) <insert link>

2015-16 Annual Report: Volume 2

Volume 2 contains the individual financial statements of government organizations, business enterprises and other miscellaneous financial statements. These organizations and enterprises include agencies, such as Metrolinx and Hydro One, and organizations like the Workplace Safety and Insurance Board.

Volume 2 PDFs

- Read Volume 2a: Financial Statements of Government Organizations (2015-16) <insert link>
- Read Volume 2b: Financial Statements of Government Organizations (2015-16) <insert link>
- Read Volume 2c: Financial Statements of Government Business Enterprises, Trusts and Miscellaneous statements (2015-16) <insert link>

Government Organizations Summary

<Insert DATA TABLE from “PA vol2 government organizations MMDDYYYY.csv” here>

Government Business Enterprises Summary

<Insert DATA TABLE from “PA vol2 government business enterprises MMDDYYYY.csv” >

Trusts Summary

<Insert DATA TABLE from “PA vol2 government business enterprises MMDDYYYY.csv” >

2015-16 Annual Report: Volume 3

Volume 3 contains the transfer payments made by ministries to recipients that are not a part of the Government of Ontario, such as hospitals, community agencies and schools. It also includes payments to vendors for goods and services, such as third-party staffing agencies, consultants and telecom providers.

Download the PDF for Volume 3: Detailed Schedules of Payments <insert link>

Detailed Schedules of Payments

<Insert DATA TABLE from “PA vol3 MMDDYYYY.csv”>

From:	Bonnie Lemcke
To:	Mike Manning
Subject:	FW: S&P and DBRS Research on OPG
Date:	Wednesday, March 01, 2017 2:45:44 PM
Attachments:	OntarioPowerGenerationInc DBRS April 6, 2016 pdf.pdf OntarioPowerGenerationInc_S&P July 12, 2016 pdf.pdf

FYI – Here are the latest rating reports on OPG.

Bonnie

From: David Cross

Sent: Wednesday, March 01, 2017 11:39 AM

To: Bonnie Lemcke

Subject: S&P and DBRS Research on OPG

Press Releases

Date of Release: April 6, 2016

DBRS Confirms Ontario Power Generation Inc. at A (low), R-1 (low), Stable Trends

DBRS Limited (DBRS) has today confirmed the Issuer Rating and Unsecured Debt rating of Ontario Power Generation Inc. (OPG or the Company) at A (low), and the Commercial Paper rating at R-1 (low), all with Stable trends. The confirmation is largely based on the continuing financial support from the Company's shareholder, the Province of Ontario (the Province; rated AA (low) by DBRS). The Province, through its agent the Ontario Electricity Financial Corporation (rated AA (low) by DBRS), provides most of OPG's financing (approximately 63% of total debt). The Company's remaining debt is in the form of non-recourse project finance debt.

The Province announced in January 2016 that OPG will be moving forward with the refurbishment of the Darlington Nuclear Generating Station (the Darlington Refurbishment). The project has a final budget of $12.8 billion, and the refurbishment of the first unit is scheduled to begin in October 2016, with the last unit to be in-service by 2026. DBRS believes that given the complexity and scale of the Darlington Refurbishment, there is significant execution risk as well as the potential for cost overruns. The high capital expenditures (capex) required, albeit spread over a ten-year period, in addition to ongoing maintenance capex (total capex forecast of approximately $2 billion for 2016), are expected to pressure OPG's key credit metrics. Although the Company's cash flow-to-debt and debt-to-capital ratios have remained strong, DBRS expects leverage to increase to approximately 40% during this period of high capex. Additionally, profitability for OPG continues to be challenged as evidenced by the negative EBIT-interest coverage ratio for the year. DBRS notes that while the in-service of the Lower Mattagami River Project and the prescription of 48 previously unregulated hydroelectric facilities to regulated rates in late 2014 have helped improve OPG's EBITDA, the Company's reported corporate return on equity (ROE; 4.1% in 2015) remains far below the approved ROE of 9.3%. This has largely been due to the high cost base of OPG, which has resulted in several disallowances by the Ontario Energy Board (OEB) for the Company to recover forecasted compensation expenses.

OPG plans to submit a five-year application with the OEB later this year for new regulated rates effective 2017. The OEB has expressed that it expects prices for hydroelectric operations to be based on an incentive regulation (IR) ratemaking methodology, and that prices for nuclear operations be based on a multi-year forecast cost-of-service approach with IR features. DBRS believes that profitability for OPG could continue to be challenged following a switch to an IR framework, as the introduction of productivity and efficiency targets could further depress earnings. However, through its Business Transformation initiative, OPG has demonstrated its ability to improve efficiency by reducing regular headcount from continuing operations by

approximately 2,700 personnel since 2011. Furthermore, earnings should also benefit from the growth in the rate base as Darlington Refurbishment pre-requisite projects are completed, and new regulated rates in 2017.

Notes:
All figures are in Canadian dollars unless otherwise noted.

The related regulatory disclosures pursuant to the National Instrument 25-101 Designated Rating Organizations are hereby incorporated by reference and can be found by clicking on the link to the right under Related Research or by contacting us at info@dbrs.com.

The applicable methodologies are Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry (October 2015), DBRS Criteria: Guarantees and Other Forms of Support (February 2016), and DBRS Criteria: Commercial Paper Liquidity Support for Non-Bank Issuers (April 2015), which can be found on our website under Methodologies.

For more information on this credit or on this industry, visit www.dbrs.com or contact us at info@dbrs.com.

DBRS will publish a full report shortly that will provide additional analytical detail on this rating action. If you are interested in receiving this report, contact us at info@dbrs.com.

Ratings

Issuer	Debt Rated	Rating Action	Rating	Trend	Notes	Published	Issued
Ontario Power Generation Inc.	Commercial Paper	Confirmed	R-1 (low)	Stb		Apr 6, 2016	CA
Ontario Power Generation Inc.	Issuer Rating	Confirmed	A (low)	Stb		Apr 6, 2016	CA
Ontario Power Generation Inc.	Unsecured Debt	Confirmed	A (low)	Stb		Apr 6, 2016	CA

US = USA Issued, NRSRO
CA = Canada Issued, NRSRO
EU = EU Issued
E = EU Endorsed
Unsolicited Participating With Access
Unsolicited Participating Without Access
Unsolicited Non-participating

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S&P Global
Ratings

RatingsDirect®

Summary:

Ontario Power Generation Inc.

Primary Credit Analyst:
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Stephen R Goltz, Toronto (416) 507-2592; stephen.goltz@spglobal.com

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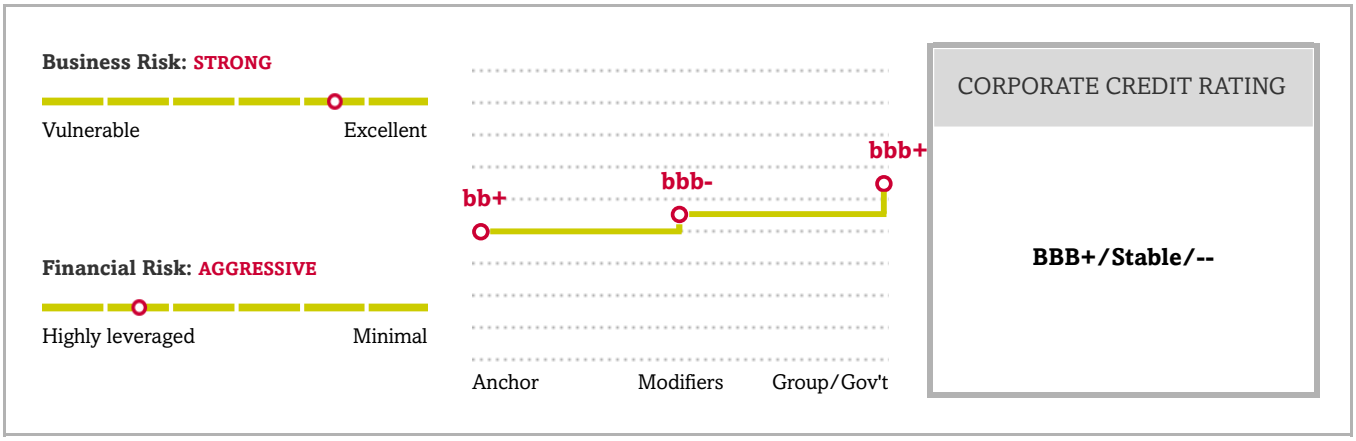
Summary:

Ontario Power Generation Inc.



Rationale

Business Risk: Strong	Financial Risk: Aggressive
• Ontario Power Generation Inc.'s (OPG) dominant position in a strong market and a diversified economy • Regulatory support for the company's nuclear assets and the bulk of its hydroelectric assets • A diversified portfolio of power-generating assets • Low-cost hydroelectric assets with diversified river systems	• Stable, regulated cash flow • Overall weak cash flow metrics • Large capital programs over next several years

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Outlook: Stable

The stable outlook reflects our view of the 'bbb-' stand-alone credit profile (SACP) on Ontario Power Generation Inc. (OPG) and that we do not expect the likelihood of extraordinary government support to change. A one-notch deterioration in either the SACP or our rating on the Province of Ontario would not change our rating on the utility.

Downside scenario

We believe a negative rating action on OPG is unlikely during our two-year outlook period given that both the SACP and our rating on Ontario would have to decline one notch. An unexpected change in our view of the relationship between OPG and the province to "moderately high" or lower could also negatively affect the rating. We could lower the SACP to 'bb+' if we expected a sustained drop in adjusted funds from operations (AFFO) -to-debt below 9%. Given the regulatory support OPG benefits, we view this as unlikely.

Upside scenario

We could take a positive rating action if we expected AFFO-to-debt to be above 13% comfortably and consistently. A one-notch improvement to OPG's SACP, all else being equal with the province, would result in a one-notch upgrade. However, we view this as unlikely during our outlook period given the Ontario regulatory framework and the extent of the company's capital spending program, including the multi-billion Darlington nuclear plant refurbishment.

S&P Global Ratings Base-Case Scenario

OPG is an Ontario-based electricity generation company whose principal business is in electricity generation and sale in the Province of Ontario. OPG supplies about half of the electricity in Ontario and is wholly owned by the province.

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Assumptions	Key Metrics

- OPG will continue to focus on its regulated electricity generation business
- The Ontario Energy Board, the provincial regulator, will continue to operate in a transparent, stable, and predictable manner
- The utility will not experience any adverse regulatory decisions
- OPG filed a five-year rate application for 2017-2021; with regulated nuclear rates under the custom incentive regulation and the regulated hydroelectric rates under the incentive rate making regulation, we expect OPG will get most of its revenue requirements approved
- The Darlington refurbishment project will incur no material delays and cost overruns

	2015A	2016E	2017E
AFFO/debt (%)	16.9	12-14	13-14

AFFO--Adjusted funds from operations. A--Actual. E--Estimated.

Business Risk: Strong

Our assessment of OPG's strong business risk profile reflects the utility's strong market position (which accounted for about 50% of Ontario's electricity generation in 2015) and a supportive regulatory framework. We expect OPG will continue to generate about 95% of its EBITDA from regulated sources, recover prudently incurred fixed and variable cost in a timely manner, and earn a moderate return on capital assets.

In addition, OPG has a diverse portfolio of generation assets comprising four nuclear (including Bruce), 65 hydro-electric, two biomass stations, three thermal stations, and one wind turbine asset; therefore, OPG is not dependent on a single or few generation assets. The hydro-electric assets are subject to hydrology risk; however, this is mitigated by the multiple river systems.

Further supporting the strong business risk profile is that OPG's service territory, the Province of Ontario, has a very strong and diversified economy with modest population growth supporting electricity consumption. However, this is offset by the ongoing demand conservation programs resulting in ratepayers being more cautious about conserving energy and reduces electricity consumption.

Due to the nature of the business, OPG does not deal directly with ratepayers and does not have a large and diverse customer base. OPG's main counterparty is the Independent Electricity System Operator, a Crown corporation, which remits monthly electricity sales revenue to OPG in the subsequent month.

Financial Risk: Aggressive

We assess OPG's financial risk profile as aggressive. For the company, we use the medial volatility table when

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assessing the cash flows to reflect the supportive regulatory framework and that virtually all of OPG's cash flows come from the higher end of the utility risk spectrum in electricity generation compared with that of transmission and distribution.

The company has a significant capital program over the next few years of about C$1.8 billion per year, including the Darlington nuclear facility refurbishment plus additional maintenance capital spending. We believe the high amount of capital spending will pressure the credit metrics. Given the Darlington refurbishment project execution starts in 2016, we forecast AFFO-to-debt of about 12%-14% during our outlook period.

Liquidity: Adequate

OPG's liquidity is considered as adequate in our view. We expect liquidity sources to exceed uses by more than 1.1x over the next 12 months. In the event of a 10% drop in the company's EBITDA, we also expect there are sufficient liquidity sources to cover uses. In our view, the company has sound relationships with banks. In the event of unexpected financial stress, we expect the utility would scale back on its capital expenditures to preserve the credit metrics.

Principal Liquidity Sources	Principal Liquidity Uses
• Cash available of about C$460 million in 2016 • Cash FFO of about C$1.45 billion in 2016 • Committed credit facilities availability total of about C$1.7 billion in 2016, of which about C$1.0 billion matures in 2021 and C$700 million matures in December 2017	• Debt maturity of about C$273 million in 2016 • Capital expenditures of about C$2.0 billion in 2016

Other Modifiers

We applied a positive comparable rating analysis modifier to OPG to reflect the company's dominant market position in Ontario as it contributes about 50% of the Province of Ontario's power generation. In addition, the company also benefits from a high proportion of regulated cash flow, providing predictability and stability in its electricity generation business. Other modifiers have no impact on the rating.

Government Influence

We believe there is a high likelihood that OPG's owner, the Province of Ontario, would provide timely and sufficient extraordinary support to the company in the event of financial distress. This is based on our assessment of a very strong link and an important role in accordance with our government-related entity criteria. Our assessment further reflects our view that:

- OPG's role to the Province of Ontario is important because it supplies more than 50% of the province's electricity

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usage. In addition, OPG provides an essential infrastructure to Ontario and its activities relates to an important public policy role (energy and environmental policies).
- OPG has a very strong link with Province of Ontario because Ontario owns 100% of OPG (strong shareholder) and has a track record of providing support to OPG (through the Ontario Electricity Financial Corporation).

The high likelihood of extraordinary government support provides a two-notch rating enhancement to OPG's 'bbb-' SACP.

Ratings Score Snapshot

Corporate Credit Rating

BBB+/Stable/--

Business risk: Strong

- **Country risk:** Very low
- **Industry risk:** Very low
- **Competitive position:** Satisfactory

Financial risk: Aggressive

- **Cash flow/Leverage:** Aggressive

Anchor: bb+

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Positive (+1 notch)

Stand-alone credit profile : bbb-

- **Likelihood of government support:** High (+2 notches from SACP)

Related Criteria And Research

Related Criteria

- Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- National And Regional Scale Credit Ratings, Sept. 22, 2014
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- Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- 2008 Corporate Criteria: Rating Each Issue, April 15, 2008

Business And Financial Risk Matrix

	Financial Risk Profile					
Business Risk Profile	Minimal	Modest	Intermediate	Significant	**Aggressive**	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	**bb+**	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

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From:	Bonnie Lemcke
To:	Mike Manning
Subject:	FW: S&P and DBRS Research on OPG
Date:	Wednesday, March 01, 2017 2:45:44 PM
Attachments:	OntarioPowerGenerationInc DBRS April 6, 2016 pdf.pdf OntarioPowerGenerationInc_S&P July 12, 2016 pdf.pdf

FYI – Here are the latest rating reports on OPG.

Bonnie

From: David Cross

Sent: Wednesday, March 01, 2017 11:39 AM

To: Bonnie Lemcke

Subject: S&P and DBRS Research on OPG

Press Releases

Date of Release: April 6, 2016

DBRS Confirms Ontario Power Generation Inc. at A (low), R-1 (low), Stable Trends

DBRS Limited (DBRS) has today confirmed the Issuer Rating and Unsecured Debt rating of Ontario Power Generation Inc. (OPG or the Company) at A (low), and the Commercial Paper rating at R-1 (low), all with Stable trends. The confirmation is largely based on the continuing financial support from the Company's shareholder, the Province of Ontario (the Province; rated AA (low) by DBRS). The Province, through its agent the Ontario Electricity Financial Corporation (rated AA (low) by DBRS), provides most of OPG's financing (approximately 63% of total debt). The Company's remaining debt is in the form of non-recourse project finance debt.

The Province announced in January 2016 that OPG will be moving forward with the refurbishment of the Darlington Nuclear Generating Station (the Darlington Refurbishment). The project has a final budget of $12.8 billion, and the refurbishment of the first unit is scheduled to begin in October 2016, with the last unit to be in-service by 2026. DBRS believes that given the complexity and scale of the Darlington Refurbishment, there is significant execution risk as well as the potential for cost overruns. The high capital expenditures (capex) required, albeit spread over a ten-year period, in addition to ongoing maintenance capex (total capex forecast of approximately $2 billion for 2016), are expected to pressure OPG's key credit metrics. Although the Company's cash flow-to-debt and debt-to-capital ratios have remained strong, DBRS expects leverage to increase to approximately 40% during this period of high capex. Additionally, profitability for OPG continues to be challenged as evidenced by the negative EBIT-interest coverage ratio for the year. DBRS notes that while the in-service of the Lower Mattagami River Project and the prescription of 48 previously unregulated hydroelectric facilities to regulated rates in late 2014 have helped improve OPG's EBITDA, the Company's reported corporate return on equity (ROE; 4.1% in 2015) remains far below the approved ROE of 9.3%. This has largely been due to the high cost base of OPG, which has resulted in several disallowances by the Ontario Energy Board (OEB) for the Company to recover forecasted compensation expenses.

OPG plans to submit a five-year application with the OEB later this year for new regulated rates effective 2017. The OEB has expressed that it expects prices for hydroelectric operations to be based on an incentive regulation (IR) ratemaking methodology, and that prices for nuclear operations be based on a multi-year forecast cost-of-service approach with IR features. DBRS believes that profitability for OPG could continue to be challenged following a switch to an IR framework, as the introduction of productivity and efficiency targets could further depress earnings. However, through its Business Transformation initiative, OPG has demonstrated its ability to improve efficiency by reducing regular headcount from continuing operations by

approximately 2,700 personnel since 2011. Furthermore, earnings should also benefit from the growth in the rate base as Darlington Refurbishment pre-requisite projects are completed, and new regulated rates in 2017.

Notes:
All figures are in Canadian dollars unless otherwise noted.

The related regulatory disclosures pursuant to the National Instrument 25-101 Designated Rating Organizations are hereby incorporated by reference and can be found by clicking on the link to the right under Related Research or by contacting us at info@dbrs.com.

The applicable methodologies are Rating Companies in the Regulated Electric, Natural Gas and Water Utilities Industry (October 2015), DBRS Criteria: Guarantees and Other Forms of Support (February 2016), and DBRS Criteria: Commercial Paper Liquidity Support for Non-Bank Issuers (April 2015), which can be found on our website under Methodologies.

For more information on this credit or on this industry, visit www.dbrs.com or contact us at info@dbrs.com.

DBRS will publish a full report shortly that will provide additional analytical detail on this rating action. If you are interested in receiving this report, contact us at info@dbrs.com.

Ratings

Issuer	Debt Rated	Rating Action	Rating	Trend	Notes	Published	Issued
Ontario Power Generation Inc.	Commercial Paper	Confirmed	R-1 (low)	Stb		Apr 6, 2016	CA
Ontario Power Generation Inc.	Issuer Rating	Confirmed	A (low)	Stb		Apr 6, 2016	CA
Ontario Power Generation Inc.	Unsecured Debt	Confirmed	A (low)	Stb		Apr 6, 2016	CA

US = USA Issued, NRSRO
CA = Canada Issued, NRSRO
EU = EU Issued
E = EU Endorsed
Unsolicited Participating With Access
Unsolicited Participating Without Access
Unsolicited Non-participating

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S&P Global
Ratings

RatingsDirect®

Summary:

Ontario Power Generation Inc.

Primary Credit Analyst:
Andrew Ng, Toronto (416) 507-2545; andrew.ng@spglobal.com

Secondary Contact:
Stephen R Goltz, Toronto (416) 507-2592; stephen.goltz@spglobal.com

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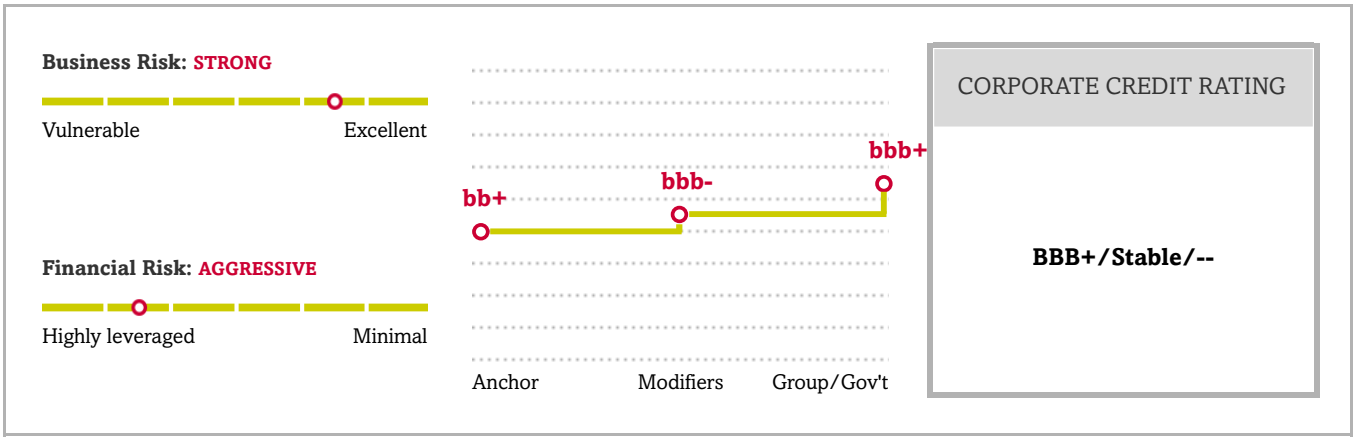

Rationale

Business Risk: Strong	Financial Risk: Aggressive
• Ontario Power Generation Inc.'s (OPG) dominant position in a strong market and a diversified economy • Regulatory support for the company's nuclear assets and the bulk of its hydroelectric assets • A diversified portfolio of power-generating assets • Low-cost hydroelectric assets with diversified river systems	• Stable, regulated cash flow • Overall weak cash flow metrics • Large capital programs over next several years

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Outlook: Stable

The stable outlook reflects our view of the 'bbb-' stand-alone credit profile (SACP) on Ontario Power Generation Inc. (OPG) and that we do not expect the likelihood of extraordinary government support to change. A one-notch deterioration in either the SACP or our rating on the Province of Ontario would not change our rating on the utility.

Downside scenario

We believe a negative rating action on OPG is unlikely during our two-year outlook period given that both the SACP and our rating on Ontario would have to decline one notch. An unexpected change in our view of the relationship between OPG and the province to "moderately high" or lower could also negatively affect the rating. We could lower the SACP to 'bb+' if we expected a sustained drop in adjusted funds from operations (AFFO) -to-debt below 9%. Given the regulatory support OPG benefits, we view this as unlikely.

Upside scenario

We could take a positive rating action if we expected AFFO-to-debt to be above 13% comfortably and consistently. A one-notch improvement to OPG's SACP, all else being equal with the province, would result in a one-notch upgrade. However, we view this as unlikely during our outlook period given the Ontario regulatory framework and the extent of the company's capital spending program, including the multi-billion Darlington nuclear plant refurbishment.

S&P Global Ratings Base-Case Scenario

OPG is an Ontario-based electricity generation company whose principal business is in electricity generation and sale in the Province of Ontario. OPG supplies about half of the electricity in Ontario and is wholly owned by the province.

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Assumptions	Key Metrics

- OPG will continue to focus on its regulated electricity generation business
- The Ontario Energy Board, the provincial regulator, will continue to operate in a transparent, stable, and predictable manner
- The utility will not experience any adverse regulatory decisions
- OPG filed a five-year rate application for 2017-2021; with regulated nuclear rates under the custom incentive regulation and the regulated hydroelectric rates under the incentive rate making regulation, we expect OPG will get most of its revenue requirements approved
- The Darlington refurbishment project will incur no material delays and cost overruns

	2015A	2016E	2017E
AFFO/debt (%)	16.9	12-14	13-14

AFFO--Adjusted funds from operations. A--Actual. E--Estimated.

Business Risk: Strong

Our assessment of OPG's strong business risk profile reflects the utility's strong market position (which accounted for about 50% of Ontario's electricity generation in 2015) and a supportive regulatory framework. We expect OPG will continue to generate about 95% of its EBITDA from regulated sources, recover prudently incurred fixed and variable cost in a timely manner, and earn a moderate return on capital assets.

In addition, OPG has a diverse portfolio of generation assets comprising four nuclear (including Bruce), 65 hydro-electric, two biomass stations, three thermal stations, and one wind turbine asset; therefore, OPG is not dependent on a single or few generation assets. The hydro-electric assets are subject to hydrology risk; however, this is mitigated by the multiple river systems.

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OPG's liquidity is considered as adequate in our view. We expect liquidity sources to exceed uses by more than 1.1x over the next 12 months. In the event of a 10% drop in the company's EBITDA, we also expect there are sufficient liquidity sources to cover uses. In our view, the company has sound relationships with banks. In the event of unexpected financial stress, we expect the utility would scale back on its capital expenditures to preserve the credit metrics.

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BBB+/Stable/--

Business risk: Strong

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- **Competitive position:** Satisfactory

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- **Cash flow/Leverage:** Aggressive

Anchor: bb+

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Satisfactory (no impact)
- **Comparable rating analysis:** Positive (+1 notch)

Stand-alone credit profile : bbb-

- **Likelihood of government support:** High (+2 notches from SACP)

Related Criteria And Research

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Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

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From:	Carlos Yep
To:	James Devine; Mike Manning
Subject:	FW: TDS_v1_SIFB_markup.docx with John Kim"s comments
Date:	Friday, April 21, 2017 9:59:20 AM
Attachments:	TDS_v1_SIFB_markup.docx

From: John Kim
Sent: Friday, April 21, 2017 9:59 AM
To: Carlos Yep
Subject: TDS_v1_SIFB_markup.docx

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GA FINANCING – TD'S ADVICE SOUGHT ON EQUITY INJECTION MECHANISM

The Capital Markets Division of the Ontario Financing Authority require TD advisors' recommendations and detailed descriptions of options vis-à-vis the proposal to provide capital ~~equity injection~~ to the Global Adjustment (GA) deferral proposal as part of the larger Ontario's Fair Hydro Plan, as announced on March 2, 2017.

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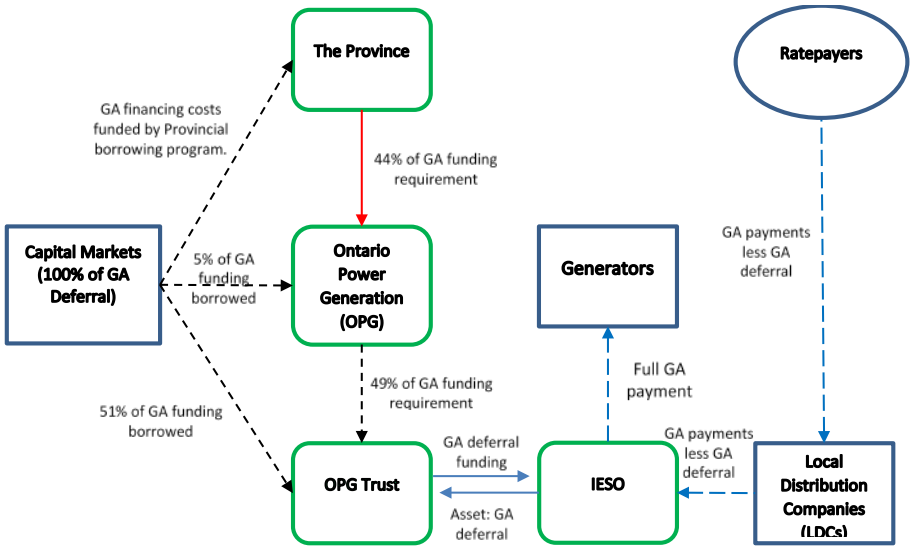
The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers in order to fully compensate generators.



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its capital

contributions ~~equity injection~~ through its annual borrowing program - from issuing debt into the capital markets.

Options for Equity Injection from TD Securities

The advice sought from TD could be summarized as follows:

When developing options for structuring the capital contributions ~~equity injection~~ from the Province to OPG for the~~amounting to~~ 44% of the ~~debt incurred~~financing requirement ~~-~~by the OPG Trust ~~set up~~ to purchase the regulatory asset from IESO, a number of ~~the following~~ underlying principles need to be addressed.

- While the Province is a sole shareholder of OPG, advice is sought to address potentially higher degrees of complexity of shareholder structure.
    - For example, options should include options for mechanism to create a level of certainty for recovering the capital ~~money~~ provided to OPG no matter if this is done as common equity or through other mechanisms, including the potential used of preferred shares.~~as 'equity injection' for the purpose of the GA deferral proposal~~.
- Under the current state of discussion, t~~T~~he capital contribution ~~equity injection~~ w~~ould~~~~ill~~ be provided on a monthly/quarterly basis to OPG by the Province.
- The capital contribution ~~equity injection~~ results in the Province, the sole shareholder of OPG receiving common shares, or another type of security, from OPG whose valuation is based on a determined and agreed upon methodology. The Province will require an internal discussion before proceeding with a dialogue with OPG on the details.
- This methodology can be as simple as book value or can be based on some ~~kind~~ form of a discounted cashflow (DCF) mechanism but TD's expertise in structuring deals is sought in this request [keeping in mind the first bullet above].
- Given the time limited nature of the capital contribution ~~equity injection~~ the Province would anticipate~~s~~ repayment at a future date.
- The potential for repayment can be implemented as follows:
    - The Province as the sole shareholder, as well as having vested legislative authority, can require OPG to issue dividends annually.
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- Eventually, the Province would need to have a discussion with OPG on the path forward.

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Summarizing Issues to Work Around [Pls. Add More CMD and FTD]

- The Province will need to consider various levels of options for certainty in being able to recover its capital ~~getting the money back,~~ as stipulated in the GA deferral plan.
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- The plan require that OPG operates on a commercial basis for the SPV with its Board needing to make independent decisions[, thus the need to have a discussion].

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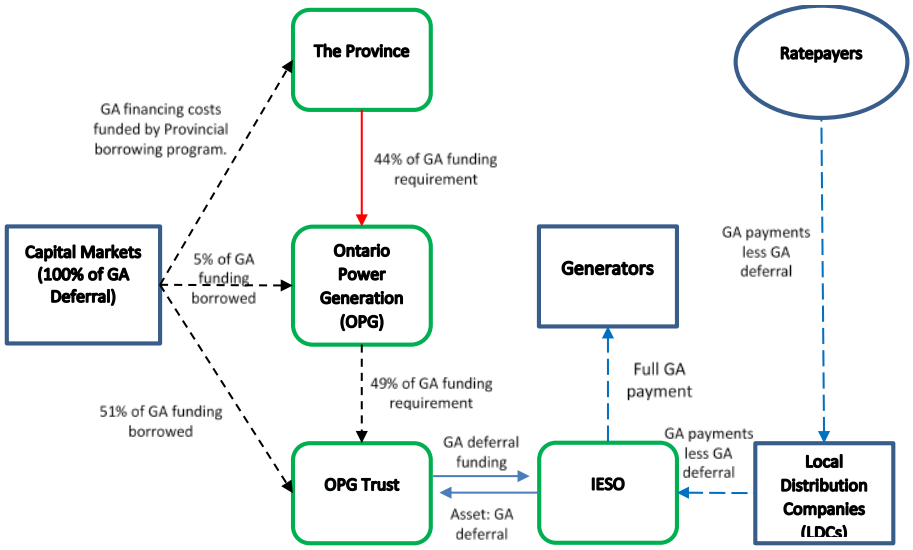

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From: Mike Manning
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: James Devine; Carlos Yep
Subject: FW: Tomorrow
Date: Tuesday, March 28, 2017 1:05:23 PM

For TD.
Mike

From: Thom, Trevor [mailto:Trevor.Thom@tdsecurities.com]
Sent: Tuesday, March 28, 2017 10:37 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: Tomorrow

Mike,

Attending from TD tomorrow:

Trevor Thom – MD & Head, Government Finance
Mike Wolff – MD & Head, Customized Solutions
Harold Holloway MD & Head, Power & Utilities Investment Banking
David Manii – Director, Corporate Banking
Brad Purkis – MD, Asset Securitization
Vy Doan – VP, Government Finance

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com

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From:	Carlos Yep
To:	Mike Manning; James Devine; John Psinas
Cc:	Ken Kandeepan
Subject:	FW: follow up from call - Global Adjustment
Date:	Friday, March 17, 2017 12:07:14 PM
Attachments:	GA Financing - Equity Injection Discussion.docx

Mike
Yesterday we had a very high level conference call with John Kim (OFA CEFD), Kaitlin Montgomery (Energy), Clara Greco (OPG).
There is a lot of work to be done on the legislative side - John Kim and Kaitlin Montgomery are looking at what is needed from the Province.
Here is a memo showing an update on what is known so far and the preliminary timelines for legislation, setting up the trust, OPG Board directives, and equity injection, etc
We have a tentative conference call set for next Thursday March 23 at 1pm. 1-866-276-0948 id#8780928#
Regards
Carlos

From: Montgomery, Kaitlin (MOF) [mailto:Kaitlin.Montgomery@ontario.ca]
Sent: Friday, March 17, 2017 11:14 AM
To: Bruno Amara ; John Kim ; Carlos Yep
Subject: RE: follow up from call
Hi – This is based on my read of relevant docs so far, one meeting I attended with OPG last week and our call – I'm sure I'm missing lots but just wanted to get something in the system for us to build on. If you could layer in any relevant info/thoughts that would be great.
Happy to chat
Kaitlin
416.326.6343

From: Montgomery, Kaitlin (MOF)
Sent: March 16, 2017 3:16 PM
To: Bruno Amara; Kim, John (OFA) (John.Kim@ofina.on.ca); Yep, Carlos (OFA)
Subject: follow up from call
Hey guys – I can pull a one-pager together on what I know in terms of timing/what I was thinking in terms of process (with placeholders) to share with you guys for review/input --- does that work?
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GA Financing – Equity Injection

Briefing Note

PURPOSE:

- Develop a timeline / mechanism to facilitate equity injections by the Province to OPG to support GA financing

CONTEXT:

- IESO will effectively sell the "right to collect" deferred future revenue from ratepayers (GA Asset) to the SPV in return for cash proceeds
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- **April:** Legislative Changes Proposed
- **May 1**: GA smoothing incorporated into RRP rates
- **May – August**: OPG/IESO bridge financing in place to manage debt
- **September**:
    - SPV borrowing begins and would continue on a quarterly basis (ie. Sept/Dec/Mar/June)
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POTENTIAL PROVINCIAL PROCESS

<u>Illustrative Timeline/ Approvals Process</u>

- OPG includes equity injection requirements in Business Plan
    - Target delivery to the Province in November of each year
    - Incorporate forecasted equity injection requirements for Province's fiscal year into business plan (March 31 year-end)
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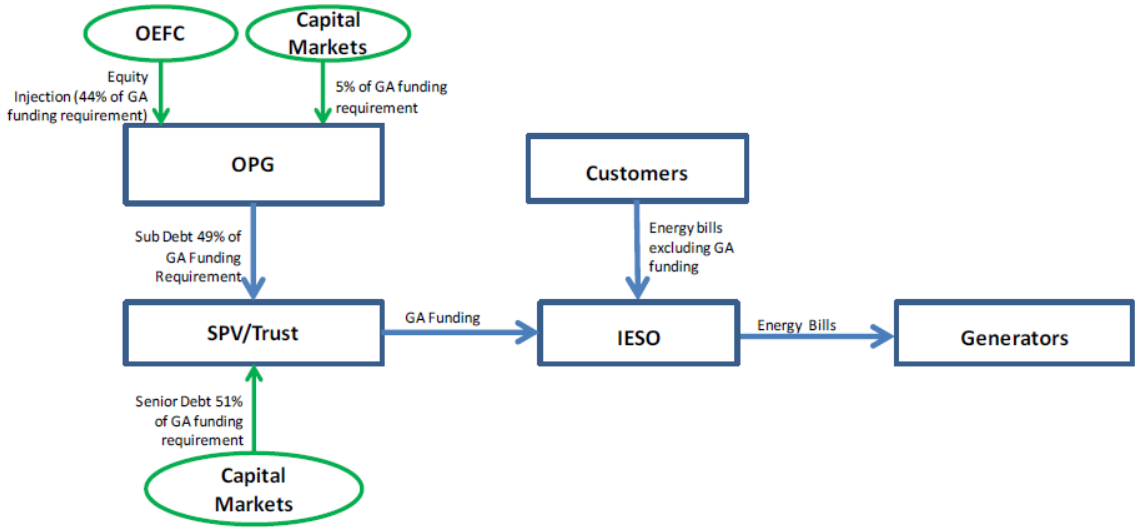
- Is there a more granular mechanism on the loan side? (ie. OPG provides x days notice that they require x amount, x person needs to sign off, etc.)

Appendix – Illustrative Structure



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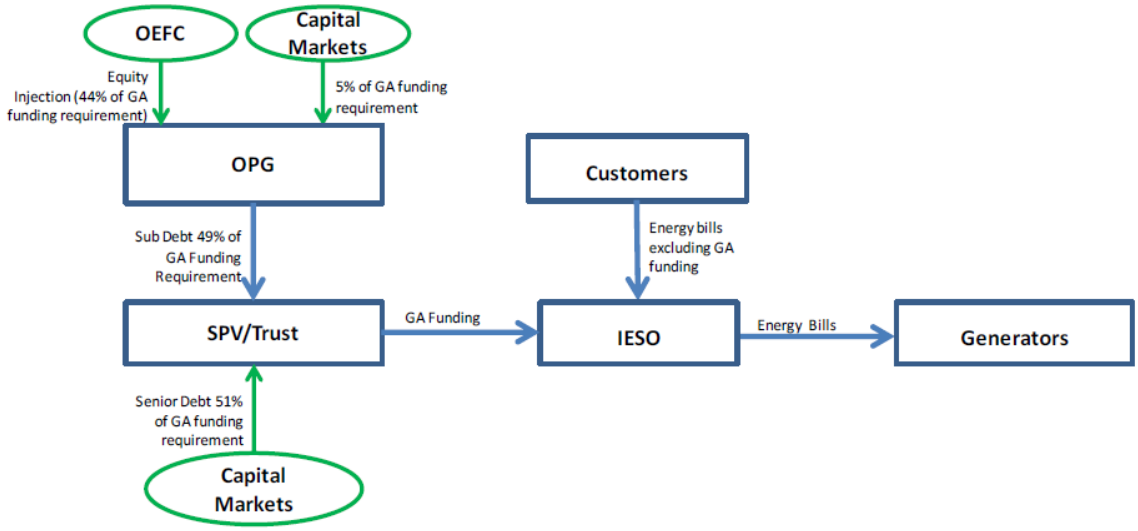

From:	John Kim
To:	John Psinas; Mike Manning; James Devine; Carlos Yep
Cc:	Francisco Chinchon; Ken Kandeepan; George Sakura; Bruno Amara; Darren Scanlan
Subject:	FW: follow up from call - OPG GA
Date:	Friday, March 24, 2017 10:44:41 AM

Hi,
Some comments from SIFB.
Thanks,
John

From: Francisco Chinchon
Sent: Friday, March 24, 2017 10:41 AM
To: John Kim
Cc: Darren Scanlan
Subject: RE: follow up from call - OPG GA

Hi John,
Just two:

1. Not sure why future BV is relevant at this point. Future BV of OPG shares would be a function of historic carrying costs, net income and dividends so not sure we need to go there at this point. Transactions between the Province and OPG have been deemed as related party transactions by OPCD so in absence of a specific rule or change in policy I'm not sure we would have to account for FMV. Also, given the Province is not taxable it should be a non-issue.
2. I'm not sure why Kaitlin thinks that OPG shares are in Energy's books (she is saying ENE holds the shares). If you check page 504 (Vol 1, 4-2) you will see that the initial $5.1B investment in OPG is under MOF. Furthermore, under the new reporting structure I understand the accountability of OPG is now with MOF although from a legal perspective the Minister of Energy remains as the sole shareholder.

Thanks,
Francisco

From: John Kim
Sent: Friday, March 24, 2017 10:19 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
Subject: FW: follow up from call - OPG GA

Any comments?

From: John Psinas
Sent: Friday, March 24, 2017 10:15 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; James Devine <James.Devine@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Carlos Yep <Carlos.Yep@ofina.on.ca>; Bruno Amara (MOF)
Cc: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; George Sakura <George.Sakura@ofina.on.ca>
Subject: FW: follow up from call - OPG GA

Regarding this statement
On the value of the shares-My understanding is it doesn't matter, but for simplicity I think we should keep it the same as the current shares unless anyone raises benefits/considerations otherwise
If the new shares will have a retractable/redeemable option, doesn't that option have a value to it,

in addition to the $20 BV? If the equity injection were to happen every year at different amounts, a valuation of that option will have to be calculated, which will in turn revise the total BV/per share. The value of the shares doesn't matter now, but in the future, if we were to sell the shares to the public, we would need to calculate BV in order to calculate the gain/loss. Will have to get some documentation from 20 years ago on how $20 was derived in the first place.
Thanks.
--John
416-325-8072

From: Carlos Yep
Sent: Thursday, March 23, 2017 4:26 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>; James Devine <James.Devine@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
Subject: FW: follow up from call - OPG GA

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Subject: RE: follow up from call
Revised version. Everything in here is up for discussion, I just wanted to share a straw man for people to react to.
Key changes relative to the last version:

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Date:	Friday, March 24, 2017 10:14:37 AM
Attachments:	2017 03 22 GA Financing - Equity Injection Discussion v02.docx

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PURPOSE:

- Develop a timeline / mechanism to facilitate equity injections by the Province to OPG to support GA financing

CONTEXT:

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To: Carlos Yep <Carlos.Yep@ofina.on.ca>; 'Montgomery, Kaitlin (MOF)' <Kaitlin.Montgomery@ontario.ca>; Bruno Amara <Bruno.Amara@ofina.on.ca>
Subject: RE: follow up from call

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416.326.6343

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GA Financing – Equity Injection

Briefing Note

PURPOSE:

- Develop a timeline / mechanism to facilitate equity injections by the Province to OPG to support GA financing

CONTEXT:

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    - 51% from capital markets
    - 49% as subordinated debt from OPG, which OPG will finance through:
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- **May 1**: GA smoothing incorporated into "RRP" rates
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<u>Required Approvals for Equity Injection in May 2017</u>

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From:	Carlos Yep
To:	Mike Manning; James Devine; John Psinas
Subject:	FW: follow up from call - OPG GA
Date:	Thursday, March 23, 2017 4:25:56 PM
Attachments:	2017 03 22 GA Financing - Equity Injection Discussion v02.docx

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From:	John Kim
To:	John Psinas; Mike Manning; James Devine; Carlos Yep
Cc:	Francisco Chinchon; Ken Kandeepan; George Sakura; Bruno Amara; Darren Scanlan
Subject:	FW: follow up from call - OPG GA
Date:	Friday, March 24, 2017 10:44:41 AM

Hi,
Some comments from SIFB.
Thanks,
John

From: Francisco Chinchon
Sent: Friday, March 24, 2017 10:41 AM
To: John Kim
Cc: Darren Scanlan
Subject: RE: follow up from call - OPG GA

Hi John,
Just two:

1. Not sure why future BV is relevant at this point. Future BV of OPG shares would be a function of historic carrying costs, net income and dividends so not sure we need to go there at this point. Transactions between the Province and OPG have been deemed as related party transactions by OPCD so in absence of a specific rule or change in policy I'm not sure we would have to account for FMV. Also, given the Province is not taxable it should be a non-issue.
2. I'm not sure why Kaitlin thinks that OPG shares are in Energy's books (she is saying ENE holds the shares). If you check page 504 (Vol 1, 4-2) you will see that the initial $5.1B investment in OPG is under MOF. Furthermore, under the new reporting structure I understand the accountability of OPG is now with MOF although from a legal perspective the Minister of Energy remains as the sole shareholder.

Thanks,
Francisco

From: John Kim
Sent: Friday, March 24, 2017 10:19 AM
To: Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>
Subject: FW: follow up from call - OPG GA

Any comments?

From: John Psinas
Sent: Friday, March 24, 2017 10:15 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; James Devine <James.Devine@ofina.on.ca>; John Kim <John.Kim@ofina.on.ca>; Carlos Yep <Carlos.Yep@ofina.on.ca>; Bruno Amara (MOF)
Cc: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; George Sakura <George.Sakura@ofina.on.ca>
Subject: FW: follow up from call - OPG GA

Regarding this statement
On the value of the shares-My understanding is it doesn't matter, but for simplicity I think we should keep it the same as the current shares unless anyone raises benefits/considerations otherwise
If the new shares will have a retractable/redeemable option, doesn't that option have a value to it,

in addition to the $20 BV? If the equity injection were to happen every year at different amounts, a valuation of that option will have to be calculated, which will in turn revise the total BV/per share. The value of the shares doesn't matter now, but in the future, if we were to sell the shares to the public, we would need to calculate BV in order to calculate the gain/loss. Will have to get some documentation from 20 years ago on how $20 was derived in the first place.
Thanks.
--John
416-325-8072

From: Carlos Yep
Sent: Thursday, March 23, 2017 4:26 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>; James Devine <James.Devine@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>
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From:	Mike Manning
To:	Scott Nelms (ENERGY); "ASHBOURNE, STEPHEN"
Subject:	FW: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date:	Friday, March 31, 2017 9:07:38 AM

I mentioned to Trevor that we wanted a meeting early next week, would early Tuesday afternoon work?

Mike

From: Thom, Trevor [mailto:Trevor.Thom@tdsecurities.com]
Sent: Friday, March 31, 2017 8:57 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com

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From: Mike Manning
To: Scott Nelms (ENERGY); "ASHBOURNE, STEPHEN"
Subject: Financial Advisor
Date: Thursday, March 30, 2017 8:46:30 AM

Hi Guys:
I didn't get back to the three dealers yesterday but was planning to do it first thing this morning,. TD sent me an email early this morning expressing some concern over compensation. This boils down to their expected role in future OPG syndicates, and I think that they recognized that this is a bigger resource commitment than they first thought based on our meeting yesterday. I cannot give them an guaranteed syndicate allocation. I explained that to Trevor and he will come back to me shortly based on his conversation with the senior TD team. Thoughts appreciated and I will get back to you shortly.
Mike

From: Mike Manning
To: "ASHBOURNE, STEPHEN"; Scott Nelms (ENERGY)
Subject: Financial Advisor
Date: Friday, March 31, 2017 8:36:21 AM

Hi Guys:
It took a bit longer than expected, but TD has been selected as discussed. They have provided assurances that they are fully committed. I've notified BMO & Scotia as well. I will circle back later today on a meeting for early next week.

Mike

From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning; Ronald Kwan
Cc:	Lynsey Wynberg; Gavin He
Subject:	Fw: Call with OPG
Date:	Wednesday, February 15, 2017 7:01:48 PM

I wouldn't mind if you sent this to Cindy, with any commentary you might have, Ken.

Ron, I tried to incorporate some of your feedback in my email to Scott, and you'll note I added Scott Nelms in, too.

Mike, I'm adding you in, too, given the borrowing angle.

Gadi

From: gadi.mayman@ofina.on.ca
Sent: Wednesday, February 15, 2017 6:58 PM
To: Scott Thompson
Cc: David McLean; Ronald Kwan; Ken Kandeepan; Lynsey Wynberg; Scott Nelms; Nancy Kennedy (MOHLTC)
Subject: Fw: Call with OPG

Hi Scott. In the roller coaster ride with whether the OPG solution for the GA works, we've just hit a pretty big bump, as you'll see from Ken's email below. I suggest that you scroll down and read that before carrying on with my email, as what I'm going to write next may be hard to follow without the context of Ken's email.

If we inject equity in the quantity OPG Is suggesting, it should make it easier for them to borrow externally, although they'd have to sound out the market and find out whether they can, and, more importantly, at what additional cost relative to the Province's funding cost. It may require a provincial guarantee, which we used to give to the old Ontario Hydro, but I don't know whether that also is something that would affect their GBE status.

Possibly of more significance is that IOD would rise substantially. If we make an equity contribution of half of the total amount they need for the GA, we'd have to borrow money without any offsetting earnings. It would start off in manageable amounts in the early years, but as the equity stake grows, the amount of interest does as well. In the scenario that Ron showed you this afternoon where interest made up up $30 billion of the total cost, about $15 billion in IOD would be added over the life of the option, if debt and equity are repaid at an equal pace to each other in the out years. Of course, if we discard this option and put this on the fiscal plan, IOD also goes up, but it would eliminate the need for OPG to borrow at a higher cost than the Province's borrowing cost.

OPG apparently indicated on the call that they could increase their dividend to offset some of

the cash that we're providing, which, on the surface would reduce our borrowing requirements and thus lessen IOD, but OPG would need to find the cash from somewhere else, so their interest costs would go up, reducing their earnings and hitting the fiscal plan that way. Since our cost of borrowing is lower than theirs, I'm not sure having them send us money makes fiscal sense. And, of course, hanging over this whole discussion is that OPG needs over $10 billion over the coming years to finance the Darlington refurbishment.

Happy to discuss further at your convenience.

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From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 6:09 PM
To: Gadi Mayman
Cc: Lynsey Wynberg; 'Veinot, Cindy (TBS)'; Ronald Kwan
Subject: FW: Call with OPG

Hi Gadi
As discussed pls find a quick summary of our call with OPG. I understand that you will be passing this on to Scott. Cindy, you may wish to so to Helen as well.
As requested by OPG, Cindy and I just finished a conference call with them. OPG is of the opinion that OEFC lending the full amount to either OPG or the Trust will seriously jeopardize the OPG's GBE status.
In order to maintain the status they propose;
That funding from the Province be limited to 49% of the amount required by the Trust and be in the form of an equity injection from the Province. An equity injunction means that the Province's net debt is not impacted since the increase in total debt is offset by an equivalent increase in the investment in OPG.
OPG also asserted that the balance 51% has to be from an outside lender in order to preserve OPG's GBE status.
Another reason for OPG also preferring the equity option instead of the Province lending the 49% is that they believe incorporating so much debt in their balance sheet with no offsetting income to service the debt will jeopardize their credit rating and impact OPG's "going concern" concept.
From the Province's perspective there will be a material impact to IOD.
John Lee indicates that OPG can in fact increase dividends to offset the cash impact of the increased IOD, but that doesn't help from a fiscal perspective. Unless OPG's net income increases and I am not sure that is possible since setting up the Trust does not contribute to net income, IOD and consequently the fiscal plan will be impacted fairly substantially as the equity injection ramps up.
I indicated to John that I will run this by you and get back to him tomorrow, but given the possible fiscal impact, not sure how doable this is.
Thanks
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From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning
Cc:	Lynsey Wynberg
Subject:	Fw: FPC
Date:	Wednesday, February 15, 2017 8:05:32 PM
Attachments:	Rate Mitigation for Class B Feb 16.pptx ATT00001.htm Cabinet Submission - Electricity Price Mitigation_Accounting Diagram.pptx ATT00002.htm

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Original Message
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, February 15, 2017 7:54 PM
To: Tim Schuurman (MOF); Gadi Mayman; Ronald Kwan
Cc: Gwendolynne Young (ENE); Christopher Pearce (MOI)
Subject: Fw: FPC

Fyi

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Thompson, Scott (MOF) <Scott.Thompson@ontario.ca>
Sent: Wednesday, February 15, 2017 7:52 PM
To: McLean, David (MOF)
Subject: FW: FPC

From: Imbrogno, Serge (ENERGY)
Sent: Wednesday, February 15, 2017 7:52:04 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Davidson, Steven (CAB); Angus, Helen (TBS)
Subject: FPC

Hi,

Attached are materials we plan to use at fiscal prep tomorrow.

Serge

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Options for Class B Electricity Consumers

Working Draft

February 16, 2017

CONFIDENTIAL DRAFT

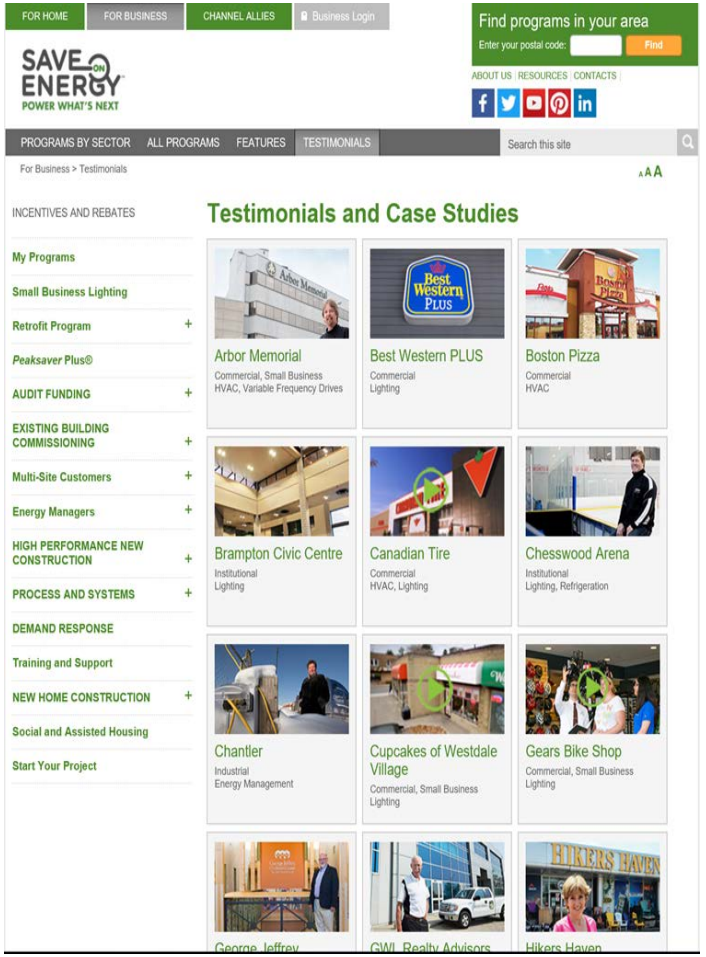
Context

- Class B electricity consumers comprise about 50,000 customers, including many mid-size manufacturers (i.e., automotive parts suppliers, plastics manufacturers), large commercial buildings (i.e., office blocks, mid-sized shopping malls) and broader public sector facilities (i.e., hospitals, college campuses).

- Through saveONenergy, many Class B consumers have already taken advantage of energy efficiency programs.

  - Although saveONenergy programs like Process and Systems Upgrade Incentive exist, these programs generally require significant investment on behalf of the customer in addition to the incentives and therefore may be difficult to take advantage of.

  - For Class B manufacturers whose electricity consumption is primarily based on process activities (e.g., injection moulding, welding, etc), traditional conservation measures like lighting and ventilation upgrades have limited benefit.

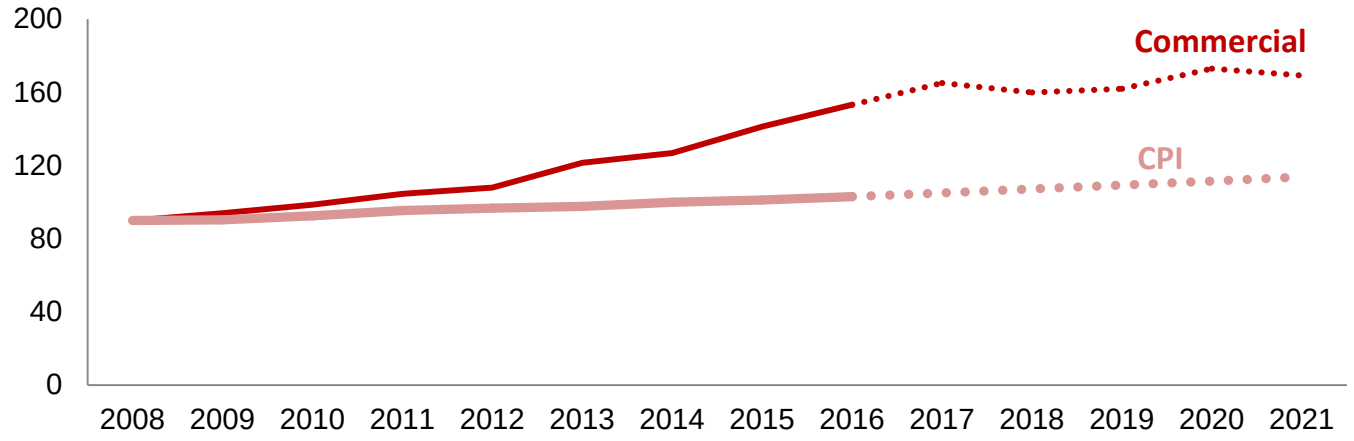


***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B consumers are too large for the Regulated Price Plan (so do not qualify for the 8% rebate for small businesses or Time-Of-Use pricing) and too small to be Class A (so do not qualify for the Industrial Conservation Initiative (ICI) for large consumers).
- Price mitigation initiatives could be provided to Class B to address stakeholders' concerns (e.g., Coalition of Concerned Manufacturers of Ontario, etc).
- The chart below highlights that the cost of electricity for Class B consumers has risen faster than CPI.

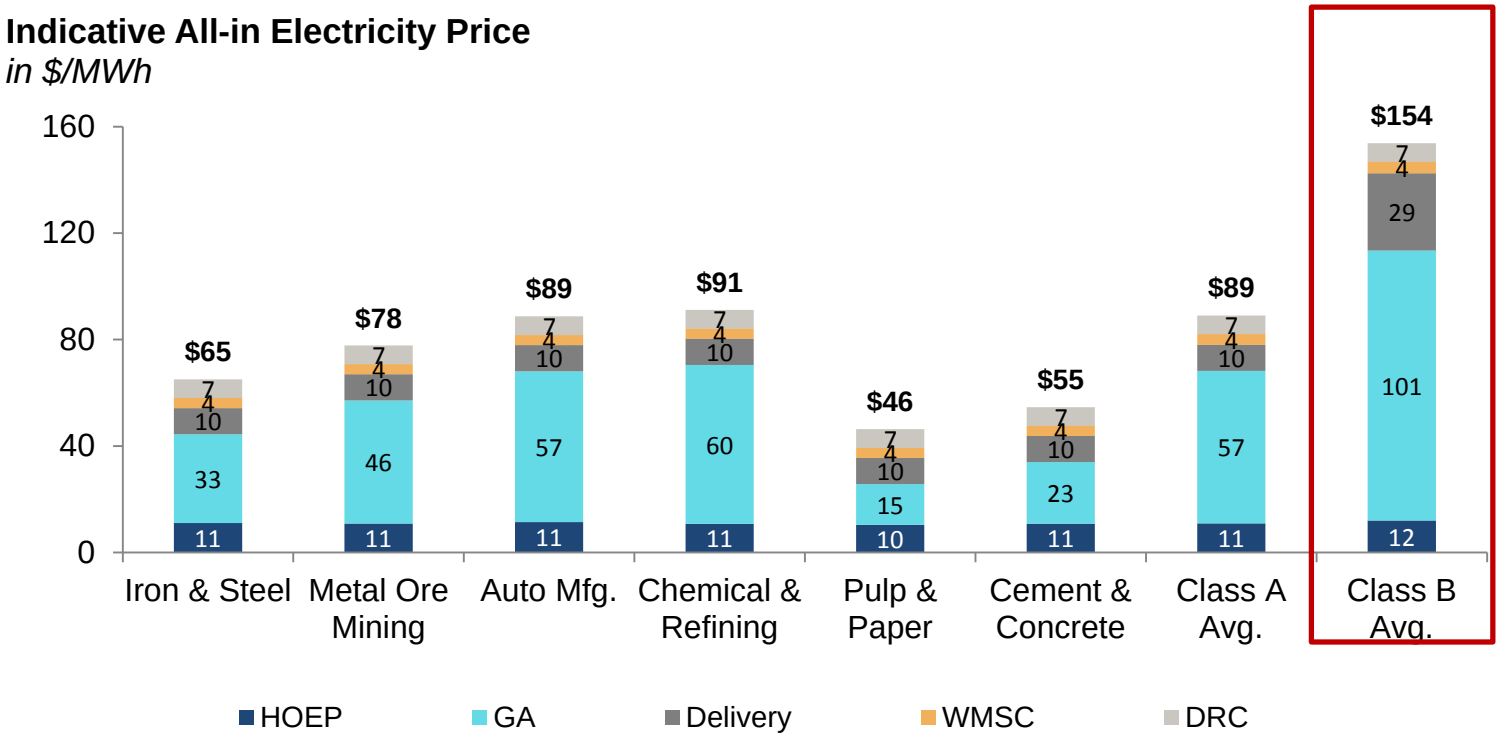
Illustrative Electricity Prices
in $/MWh



***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B electricity consumers pay higher electricity prices compared to Class A due to their inability to qualify for Industrial Conservation Initiative (ICI):



Note: Estimates reflect year-to-date June 2016.

Rate Mitigation Options

- Options for consideration include:
  1) GA Smoothing for All;
  2) Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation through the GGRA;
  3) Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers;
  4) Extend 8% Rebate to include Class B Consumers; and
  5) Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs).

- The options listed above can be combined to reduce prices for all electricity consumers including Class B or to target Class B specifically.

1a. GA Smoothing for All – Residential Bills Lowered by 20% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

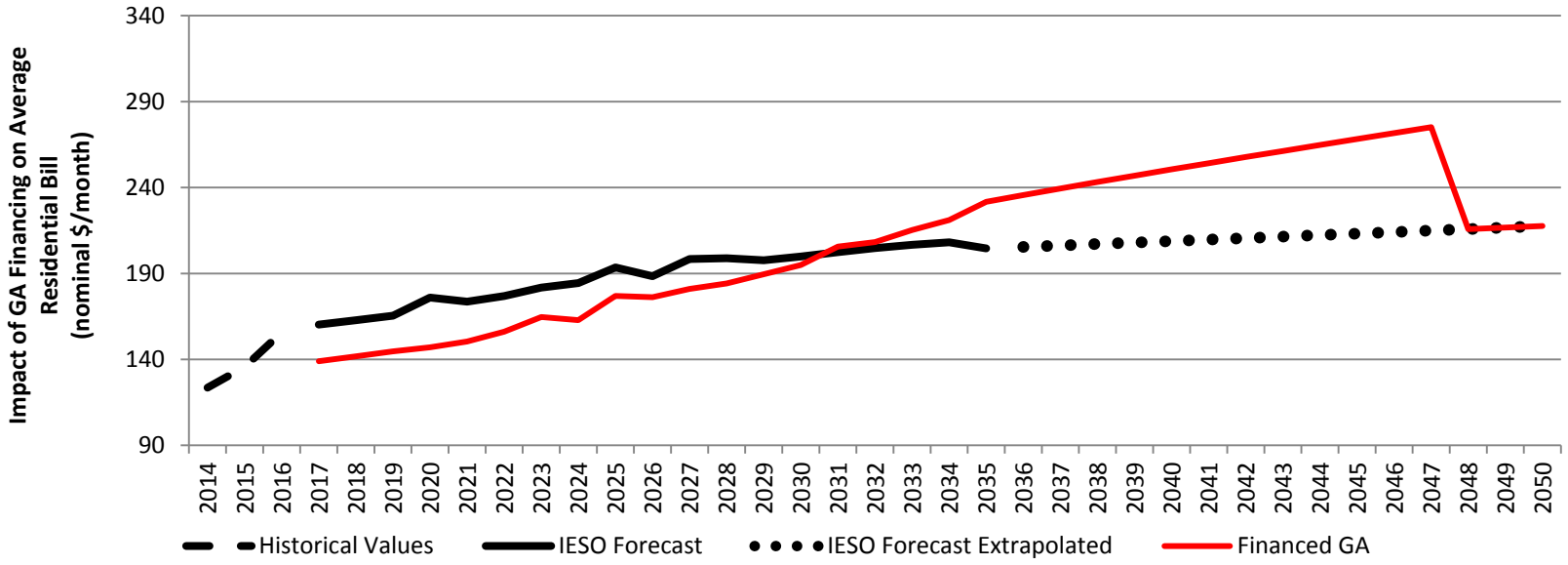
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**137**	**132**	**134**	**135**	**138**
Year-over-Year Change		-14%	-4%	2%	1%	2%
Change from Forecast		-17%	-18%	-17%	-22%	-18%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**72**	**74**	**69**	**70**	**76**
Year-over-Year Change		-20%	3%	-7%	2%	7%
Change from Forecast		-21%	-20%	-21%	-26%	-21%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1a. GA Smoothing for All (Borrow $3.3 billion in 2017, Residential Bills Lowered by 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.6	-18.4	-15.2	-19.1	-14.7	-10.9	-15.4	-13.0	-7.2	-4.4	2.8	3.1	7.6	11.5	24.0	26.7	29.3	31.9	34.4	36.9	39.3	41.7	44.1	46.4	48.7	51.0	53.2	0.0
Total Accumulated Debt *($ billion)*	3.3	6.8	10.4	15.5	19.9	24.1	28.0	32.8	37.1	40.9	45.7	50.3	54.2	57.8	60.2	62.7	64.6	65.8	64.7	63.1	60.9	58.1	54.6	50.5	45.6	40.1	33.7	26.6	18.6	9.8	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	3.3	3.5	3.6	5.1	4.4	4.3	3.9	4.8	4.3	3.8	4.8	4.6	3.9	3.6	2.4	2.5	1.8	1.2	-1.0	-1.6	-2.2	-2.8	-3.5	-4.1	-4.8	-5.6	-6.3	-7.1	-8.0	-8.9	-9.8	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with no limit above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

1b. GA Smoothing for All - Residential Bills Lowered by 16% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

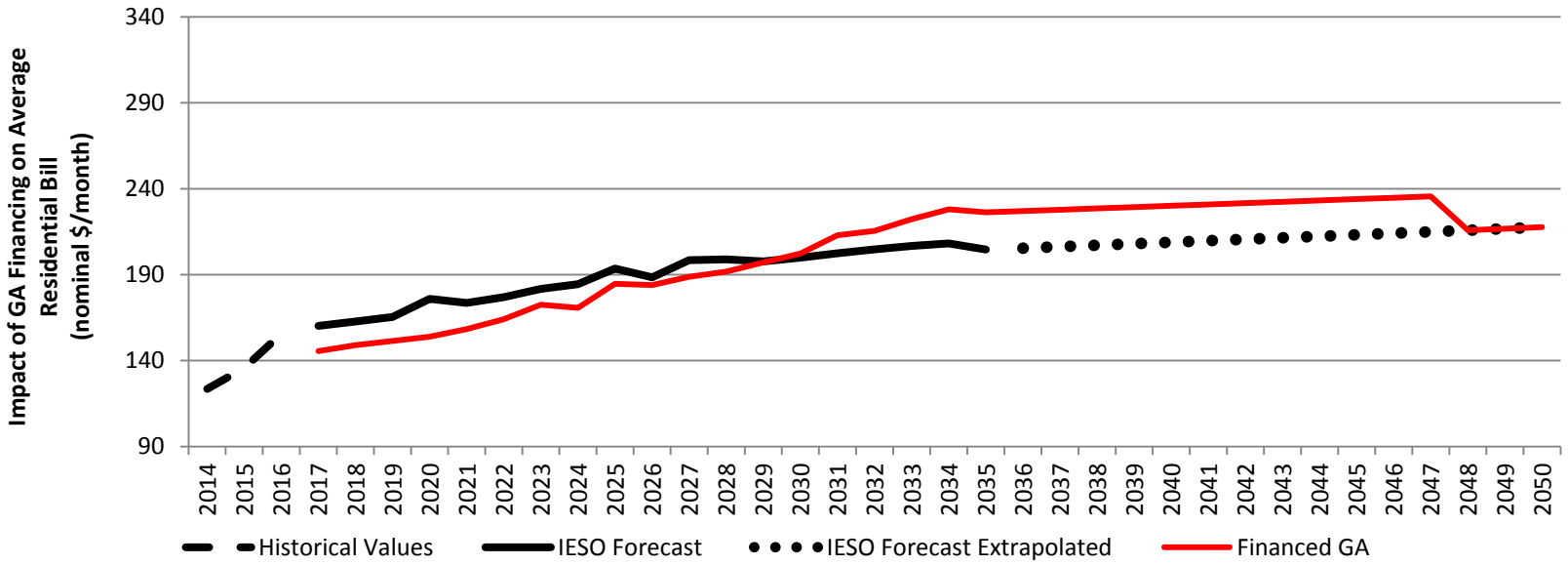
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)		153	155	158	168	165
Impact of GA Financing		-13	-12	-12	-19	-14
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		137	140	143	146	149
8% rebate		-11	-11	-11	-12	-12
HST		18	18	19	19	19
Revised Bill (includes HST)	**163**	**144**	**147**	**150**	**153**	**157**
Year-over-Year Change		-12%	2%	2%	2%	3%
Change from Forecast		**-16%**	**-16%**	**-16%**	**-19%**	**-16%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**145**	**140**	**142**	**144**	**148**
Year-over-Year Change		-9%	-3%	1%	1%	3%
Change from Forecast		-12%	-12%	-12%	-17%	-13%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**77**	**80**	**74**	**76**	**81**
Year-over-Year Change		-14%	3%	-7%	2%	8%
Change from Forecast		-15%	-14%	-15%	-21%	-15%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1b. GA Smoothing for All (Borrow $2.3 billion in 2017, Residential Bills Lowered by 16%)



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Average Monthly Residential Bill Impact pre-tax *($/month)*	-13.0	-12.2	-12.4	-19.5	-13.5	-11.4	-8.2	-12.2	-7.8	-4.0	-8.6	-6.2	-0.6	2.2	9.3	9.5	13.8	17.6	19.2	19.1	19.0	18.9	18.9	18.8	18.7	18.6	18.5	18.5	18.4	18.3	18.2	0.0
Total Accumulated Debt *($ billion)*	2.3	4.6	7.0	10.8	13.8	16.5	18.8	21.9	24.4	26.3	29.2	31.8	33.5	34.8	34.9	35.0	34.3	32.9	31.0	29.1	27.1	24.9	22.7	20.3	17.8	15.2	12.5	9.6	6.5	3.4	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.3	2.3	2.4	3.8	2.9	2.7	2.3	3.1	2.5	1.9	2.9	2.6	1.7	1.3	0.1	0.1	-0.7	-1.4	-1.8	-1.9	-2.0	-2.1	-2.2	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0	-3.2	-3.4	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.25billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

2. Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- Under the Climate Change Action Plan (CCAP), Ontario committed $1 billion to $1.32 billion of intended Greenhouse Gas Reduction Account (GGRA) funding over the 2017 to 2020 period to keep electricity rates affordable.

- Conservation supports the reduction of GHGs by avoiding/deferring future energy infrastructure investments and reducing natural gas peaking generation and related GHGs.
  - Electricity conservation programs between 2015 and 2020 are expected to result in 1.3 Mt of GHG reduction in 2020, equivalent to taking 300,000 cars off the road in that year.

- The cost of conservation could be shifted away from the rate-base to provide price mitigation for all electricity consumers, including Class B.

- Assuming the CCAP funding is spread equally over the four year period at $250 million to $330 million annually, Class B commercial and small industrial consumer would be reduced by up to $2.50/MWh. See below for the corresponding estimates.
  - Alternatively, funding could be ramped over the course of the four year period – starting at a lower funding envelope in 2017 and increasing over time to total $1 billion to $1.32 billion.

Estimated Benefit	2017	2018	2019	2020	2021
Class B ($/MWh)	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50
Class A ($/MWh)	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56
Residential Bill ($/750 kWh)	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90

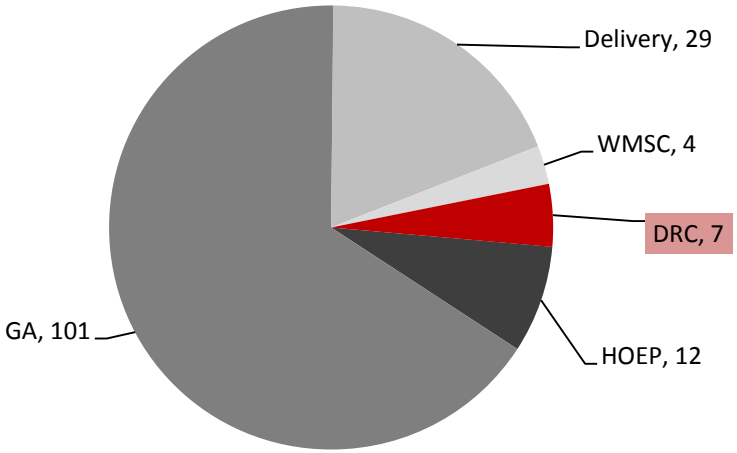
3. Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- The Debt Retirement Charge (DRC) has already been removed from residential bills. For all other consumers the DRC is scheduled to be removed by April 2018.

- Eliminating DRC earlier would save $7/MWh for all non-RPP Class B consumers.
  - This would represent a 4% reduction for a Class B consumer based on current prices.

- Options include:
  1) Shifting DRC which otherwise would be paid by Class B to Class A consumers. This could require extending the legislated DRC retirement date;
  2) Providing a reduction in DRC rather than complete elimination for Class B; or
  3) Removing the DRC completely for non-RPP Class B.

Typical Non-RPP Class B Price
in $/MWh



Fiscal Impact ($M)11	2017-18	2018-19
1) Shift Class B DRC to Class A*	197	-197
2) Reduce DRC by $3.50/MWh	148	-
3) Remove DRC completely for Class B	295	-

*** Note:** Estimates assume elimination of DRC is retroactive to January 1, 2017 and could be reflected in bills as early as April 1, 2017. Legislative / regulatory amendments to shift the cost to Class A would come into effect by January 1, 2018.

4. Extend 8% Rebate to Include Class B Consumers

- Ontario currently rebates the provincial portion of the HST from the pre-tax bills of electricity consumers eligible for RPP (e.g., residential, small business and farms) as of January 1, 2017.
- The 8% rebate could be extended beyond RPP eligible consumers to non-RPP Class B.
- Providing the rebate to more consumers would increase the cost by an estimated $770 million per year over the next four years.
  - Fiscal impacts would vary depending on changes in demand from Class B, including consumers that switch from Class A to Class B to take advantage of the rebate, as well as the impact of retail contracts on the total bills of Class B consumers.
- Ministry of Energy would work with the MOF on implementation as necessary.

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
Extend 8% Rebate	-13	-13	-13	-14	-14

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
Extend 8% Rebate	762	749	770	801	TBC

5. Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- Consideration could be given to provide a comprehensive package of tax-based measures to reduce prices for Class B consumers, including:
  - Lowering corporate taxes for SMEs;
  - Tax credits; and
  - Tax-based incentives.

- Tax-based incentives are offered in a number of jurisdictions such as New York, Minnesota, Iowa and South Carolina to reduce the cost of electricity that retain jobs or are considered electricity intensive.

- Fiscal impacts would vary depending on the design of the strategy. Further analysis would be required on the potential impacts for consumers and the fiscal plan. Ministry of Energy will work with MEDG, TBS and MOF as necessary.

Considerations – Ratepayer / Fiscal Impacts

- Below are estimated ratepayer and fiscal impacts:

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
GA Financing for All (Scenario 1a)	-25	-25	-24	-34	-28
Fund a portion of Conservation through GGRA**	-2.5	-2.5	-2.5	-2.5	-2.5
Eliminate DRC for Non-RPP Class B	-7	-	-	-	-
Extend 8% Rebate	-13	-13	-13	-14	-14
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
GA Financing for All (Scenario 1a)*	-	-	-	-	-
Fund a portion of Conservation through GGRA**	225-330	225-330	225-330	225-330	225-330
Eliminate DRC for Non-RPP Class B	295	-	-	-	-
Extend 8% Rebate	762	749	770	801	TBC
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

***Note:** GA smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met.
****Note:** Funding via the Greenhouse Gas Reduction Account (GGRA), estimated impact illustrates the high end of the range.

Considerations

Global Adjustment Smoothing

- GA smoothing accounting / legal analysis is ongoing.

Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- It is difficult to quantify the legal risk of a successful constitutional challenge to the cap and trade program associated with a single initiative in isolation. The risk will depend on a holistic assessment of the amount of money deposited into the GGRA and the character of all initiatives supported by cap and trade auction proceeds.

- In principle, there should be only a low risk if the government used cap and trade auction proceeds to defray the ongoing costs of conservation programs currently funded out of the global adjustment mechanism. This is because the programs are collectively expected to reduce CO2 emissions by hundreds of thousands of tonnes each year which seems to fit squarely within the regulatory purpose of the CCMLcE Act.

- However, initiatives which provide a rebate on electricity attract particular scrutiny as they tend to incent consumers to use more rather than less electricity which may frustrate the purpose of the CCMLcE Act. To the extent that funding conservation costs out of the GGRA constitutes a substantial portion of total GGRA spending, it will invite further scrutiny and will increase the legal risk of a successful challenge.

Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- There is precedent for removing DRC from electricity consumers' bills. Effective January 1, 2016, DRC was removed for residential electricity bills. However, removing DRC early would only provide Class B consumers relief until April 2018 (i.e., approximately 1-yr of relief).
- Trade implications should be considers.

Extend 8% Rebate to Include Class B Consumers

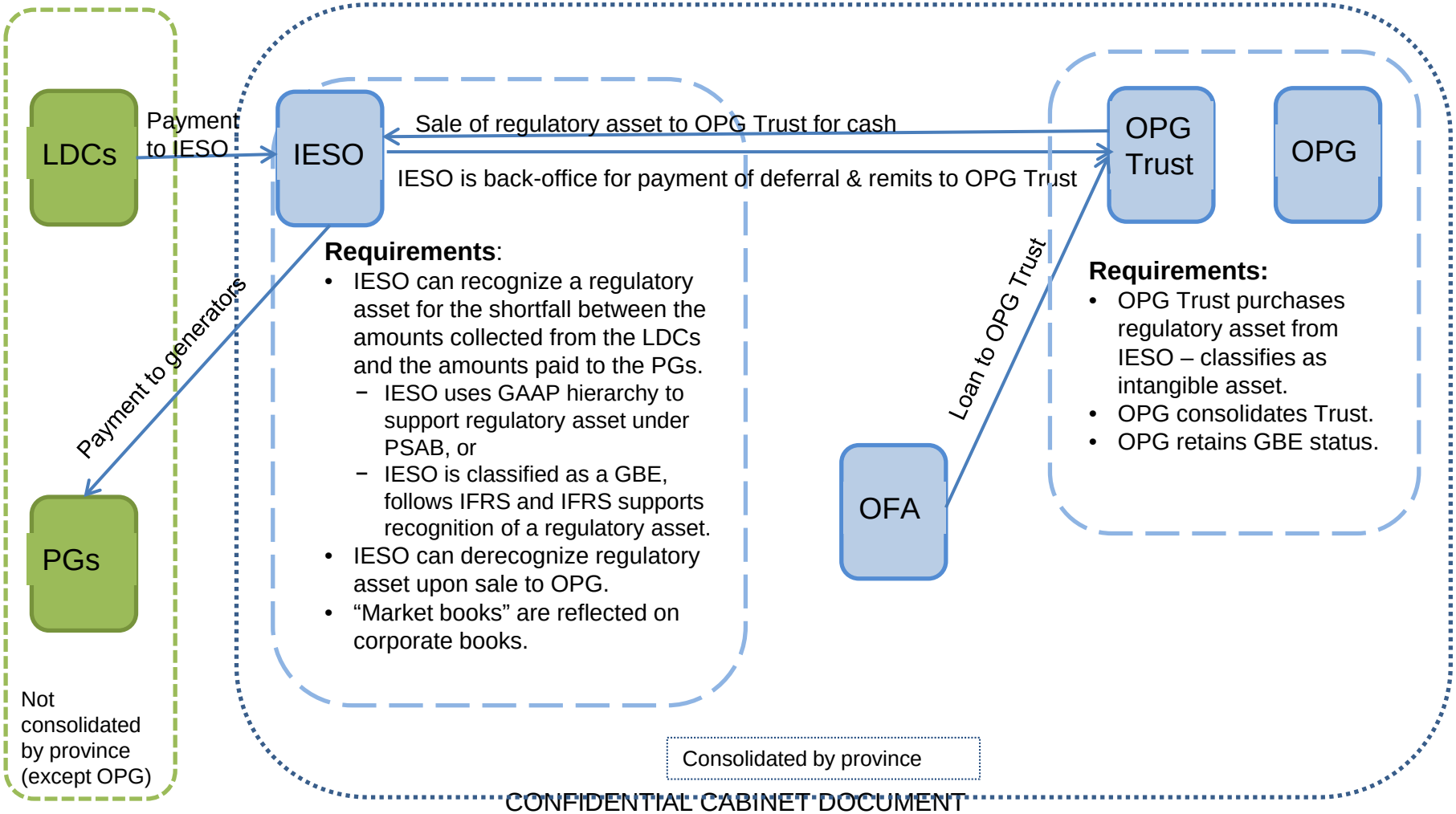
- Trade implications should be considers.

Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- The Ministry of Energy would work with MOF and MEDG to develop targeted tax-based credits and initiatives.

GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning
Cc:	Lynsey Wynberg
Subject:	Fw: FPC
Date:	Wednesday, February 15, 2017 8:05:32 PM
Attachments:	Rate Mitigation for Class B Feb 16.pptx ATT00001.htm Cabinet Submission - Electricity Price Mitigation_Accounting Diagram.pptx ATT00002.htm

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Original Message
From: McLean, David (MOF) <David.McLean@ontario.ca>
Sent: Wednesday, February 15, 2017 7:54 PM
To: Tim Schuurman (MOF); Gadi Mayman; Ronald Kwan
Cc: Gwendolynne Young (ENE); Christopher Pearce (MOI)
Subject: Fw: FPC

Fyi

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Thompson, Scott (MOF) <Scott.Thompson@ontario.ca>
Sent: Wednesday, February 15, 2017 7:52 PM
To: McLean, David (MOF)
Subject: FW: FPC

From: Imbrogno, Serge (ENERGY)
Sent: Wednesday, February 15, 2017 7:52:04 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB); Thompson, Scott (MOF); Davidson, Steven (CAB); Angus, Helen (TBS)
Subject: FPC

Hi,

Attached are materials we plan to use at fiscal prep tomorrow.

Serge

Ontario

MINISTRY OF
ENERGY

Rate Mitigation Options for Class B Electricity Consumers

Working Draft

February 16, 2017

CONFIDENTIAL DRAFT

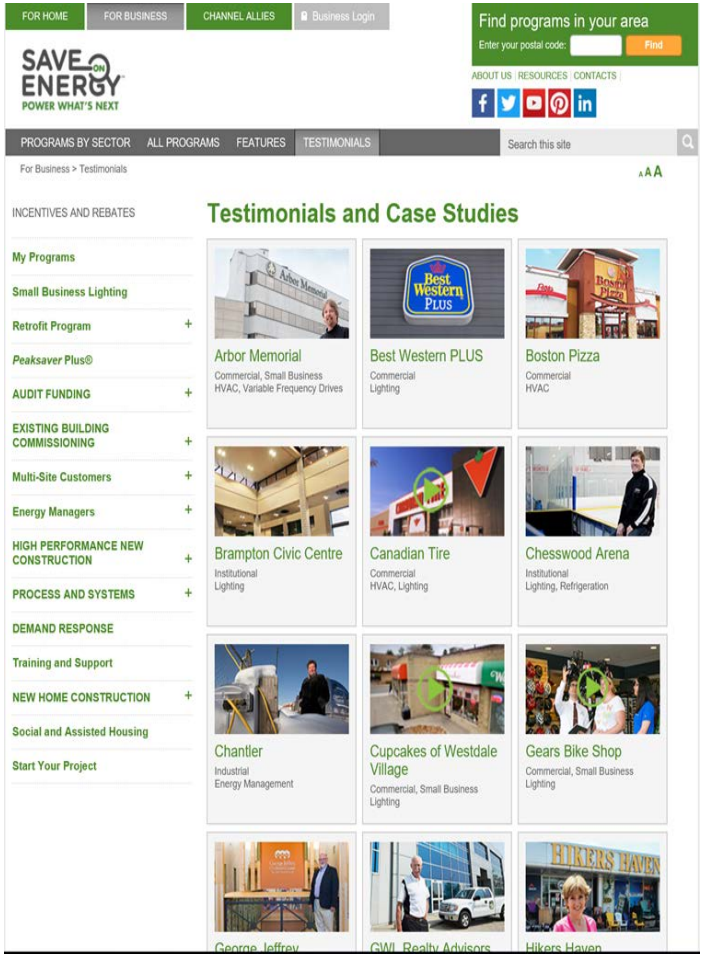
Context

- Class B electricity consumers comprise about 50,000 customers, including many mid-size manufacturers (i.e., automotive parts suppliers, plastics manufacturers), large commercial buildings (i.e., office blocks, mid-sized shopping malls) and broader public sector facilities (i.e., hospitals, college campuses).

- Through saveONenergy, many Class B consumers have already taken advantage of energy efficiency programs.

  - Although saveONenergy programs like Process and Systems Upgrade Incentive exist, these programs generally require significant investment on behalf of the customer in addition to the incentives and therefore may be difficult to take advantage of.

  - For Class B manufacturers whose electricity consumption is primarily based on process activities (e.g., injection moulding, welding, etc), traditional conservation measures like lighting and ventilation upgrades have limited benefit.

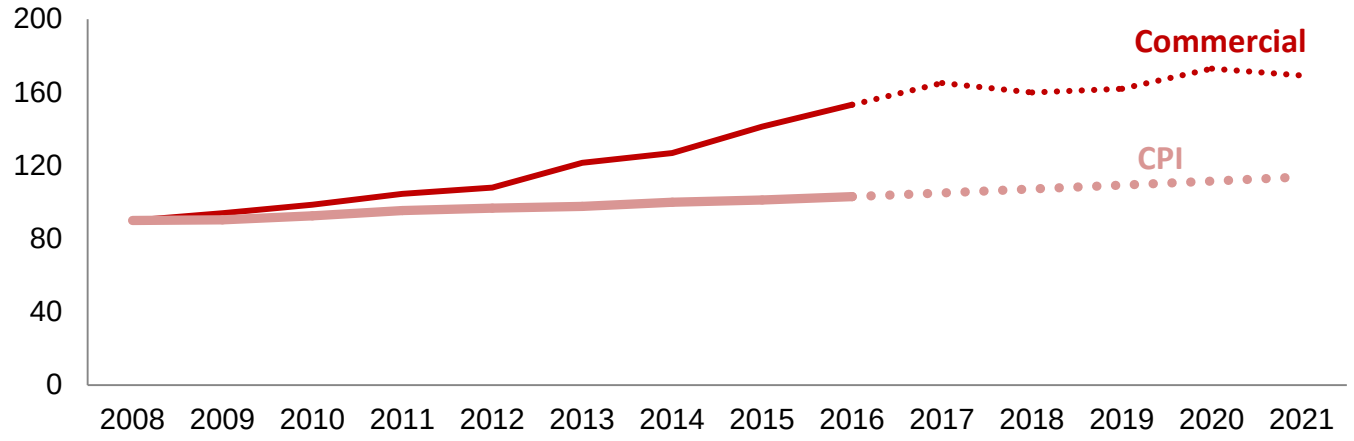


***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B consumers are too large for the Regulated Price Plan (so do not qualify for the 8% rebate for small businesses or Time-Of-Use pricing) and too small to be Class A (so do not qualify for the Industrial Conservation Initiative (ICI) for large consumers).
- Price mitigation initiatives could be provided to Class B to address stakeholders' concerns (e.g., Coalition of Concerned Manufacturers of Ontario, etc).
- The chart below highlights that the cost of electricity for Class B consumers has risen faster than CPI.

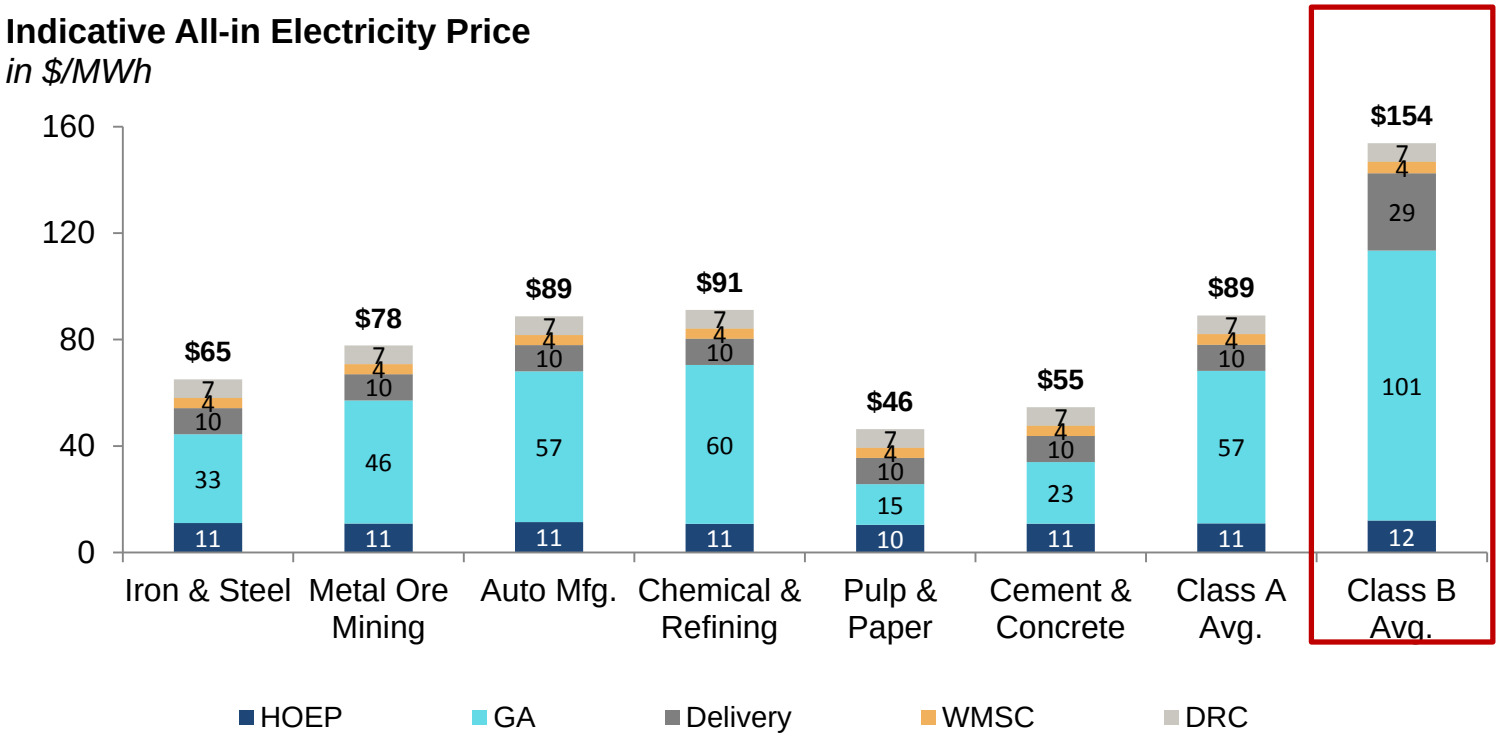
Illustrative Electricity Prices
in $/MWh



***Source*:** IESO; OEB; Ministry of Energy

Context (cont'd)

- Class B electricity consumers pay higher electricity prices compared to Class A due to their inability to qualify for Industrial Conservation Initiative (ICI):



Note: Estimates reflect year-to-date June 2016.

Rate Mitigation Options

- Options for consideration include:
  1) GA Smoothing for All;
  2) Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation through the GGRA;
  3) Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers;
  4) Extend 8% Rebate to include Class B Consumers; and
  5) Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs).

- The options listed above can be combined to reduce prices for all electricity consumers including Class B or to target Class B specifically.

1a. GA Smoothing for All – Residential Bills Lowered by 20% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

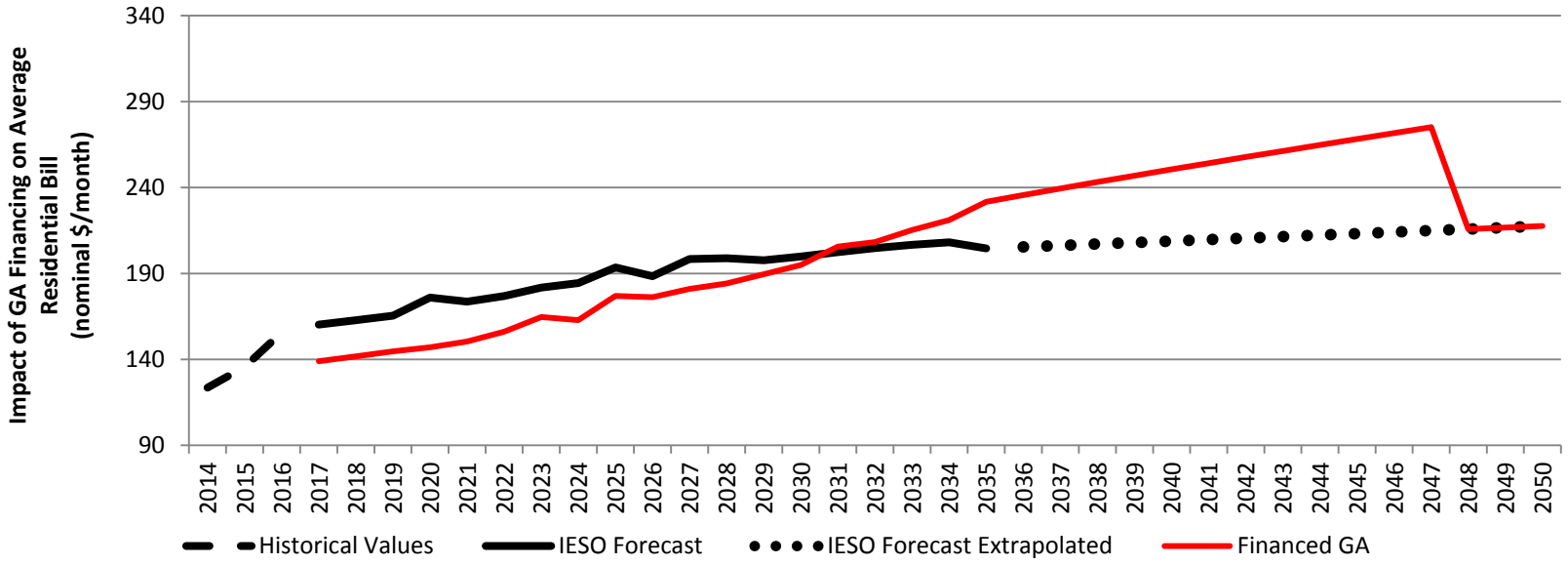
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**137**	**132**	**134**	**135**	**138**
Year-over-Year Change		-14%	-4%	2%	1%	2%
Change from Forecast		-17%	-18%	-17%	-22%	-18%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**72**	**74**	**69**	**70**	**76**
Year-over-Year Change		-20%	3%	-7%	2%	7%
Change from Forecast		-21%	-20%	-21%	-26%	-21%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1a. GA Smoothing for All (Borrow $3.3 billion in 2017, Residential Bills Lowered by 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.6	-18.4	-15.2	-19.1	-14.7	-10.9	-15.4	-13.0	-7.2	-4.4	2.8	3.1	7.6	11.5	24.0	26.7	29.3	31.9	34.4	36.9	39.3	41.7	44.1	46.4	48.7	51.0	53.2	0.0
Total Accumulated Debt *($ billion)*	3.3	6.8	10.4	15.5	19.9	24.1	28.0	32.8	37.1	40.9	45.7	50.3	54.2	57.8	60.2	62.7	64.6	65.8	64.7	63.1	60.9	58.1	54.6	50.5	45.6	40.1	33.7	26.6	18.6	9.8	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	3.3	3.5	3.6	5.1	4.4	4.3	3.9	4.8	4.3	3.8	4.8	4.6	3.9	3.6	2.4	2.5	1.8	1.2	-1.0	-1.6	-2.2	-2.8	-3.5	-4.1	-4.8	-5.6	-6.3	-7.1	-8.0	-8.9	-9.8	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with no limit above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

1b. GA Smoothing for All - Residential Bills Lowered by 16% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

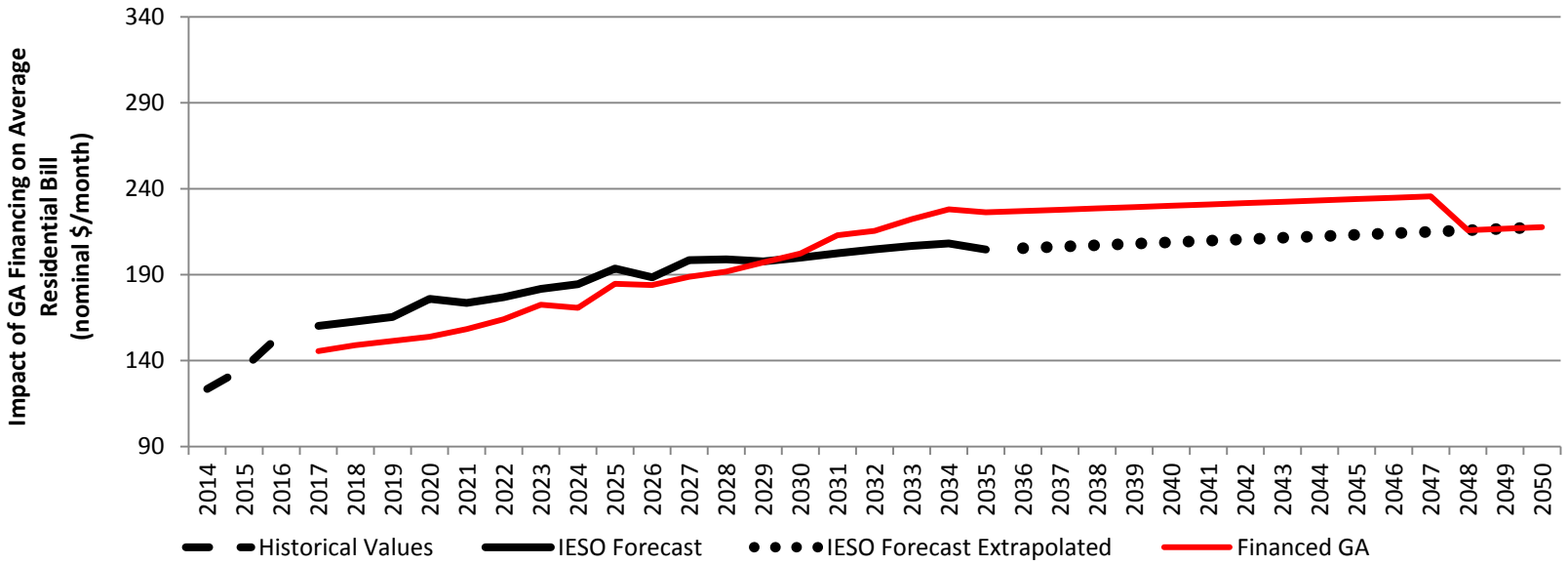
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)		153	155	158	168	165
Impact of GA Financing		-13	-12	-12	-19	-14
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		137	140	143	146	149
8% rebate		-11	-11	-11	-12	-12
HST		18	18	19	19	19
Revised Bill (includes HST)	**163**	**144**	**147**	**150**	**153**	**157**
Year-over-Year Change		-12%	2%	2%	2%	3%
Change from Forecast		**-16%**	**-16%**	**-16%**	**-19%**	**-16%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**145**	**140**	**142**	**144**	**148**
Year-over-Year Change		-9%	-3%	1%	1%	3%
Change from Forecast		-12%	-12%	-12%	-17%	-13%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**77**	**80**	**74**	**76**	**81**
Year-over-Year Change		-14%	3%	-7%	2%	8%
Change from Forecast		-15%	-14%	-15%	-21%	-15%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

1b. GA Smoothing for All (Borrow $2.3 billion in 2017, Residential Bills Lowered by 16%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-13.0	-12.2	-12.4	-19.5	-13.5	-11.4	-8.2	-12.2	-7.8	-4.0	-8.6	-6.2	-0.6	2.2	9.3	9.5	13.8	17.6	19.2	19.1	19.0	18.9	18.9	18.8	18.7	18.6	18.5	18.5	18.4	18.3	18.2	0.0
Total Accumulated Debt *($ billion)*	2.3	4.6	7.0	10.8	13.8	16.5	18.8	21.9	24.4	26.3	29.2	31.8	33.5	34.8	34.9	35.0	34.3	32.9	31.0	29.1	27.1	24.9	22.7	20.3	17.8	15.2	12.5	9.6	6.5	3.4	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.3	2.3	2.4	3.8	2.9	2.7	2.3	3.1	2.5	1.9	2.9	2.6	1.7	1.3	0.1	0.1	-0.7	-1.4	-1.8	-1.9	-2.0	-2.1	-2.2	-2.4	-2.5	-2.6	-2.7	-2.9	-3.0	-3.2	-3.4	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.25billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

2. Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- Under the Climate Change Action Plan (CCAP), Ontario committed $1 billion to $1.32 billion of intended Greenhouse Gas Reduction Account (GGRA) funding over the 2017 to 2020 period to keep electricity rates affordable.

- Conservation supports the reduction of GHGs by avoiding/deferring future energy infrastructure investments and reducing natural gas peaking generation and related GHGs.
  - Electricity conservation programs between 2015 and 2020 are expected to result in 1.3 Mt of GHG reduction in 2020, equivalent to taking 300,000 cars off the road in that year.

- The cost of conservation could be shifted away from the rate-base to provide price mitigation for all electricity consumers, including Class B.

- Assuming the CCAP funding is spread equally over the four year period at $250 million to $330 million annually, Class B commercial and small industrial consumer would be reduced by up to $2.50/MWh. See below for the corresponding estimates.
  - Alternatively, funding could be ramped over the course of the four year period – starting at a lower funding envelope in 2017 and increasing over time to total $1 billion to $1.32 billion.

Estimated Benefit	2017	2018	2019	2020	2021
Class B ($/MWh)	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50	1.90 – 2.50
Class A ($/MWh)	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56	1.20 – 1.56
Residential Bill ($/750 kWh)	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90	1.43 – 1.90

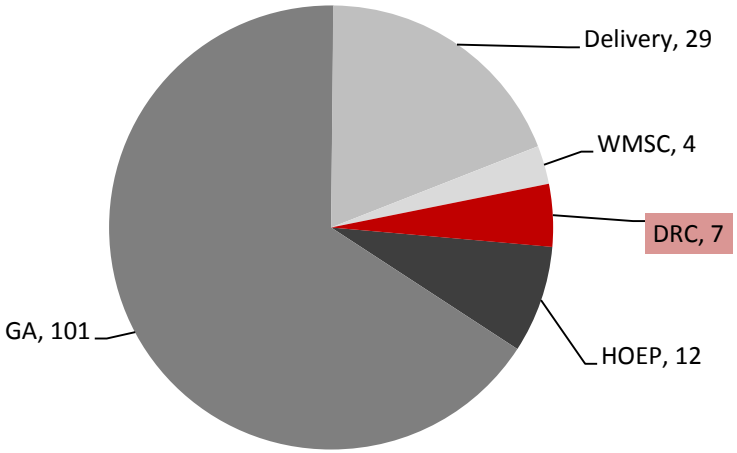
3. Remove Debt Retirement Charge Early (DRC) for Non-RPP Class B Consumers

- The Debt Retirement Charge (DRC) has already been removed from residential bills. For all other consumers the DRC is scheduled to be removed by April 2018.

- Eliminating DRC earlier would save $7/MWh for all non-RPP Class B consumers.
  - This would represent a 4% reduction for a Class B consumer based on current prices.

- Options include:
  1) Shifting DRC which otherwise would be paid by Class B to Class A consumers. This could require extending the legislated DRC retirement date;
  2) Providing a reduction in DRC rather than complete elimination for Class B; or
  3) Removing the DRC completely for non-RPP Class B.

Typical Non-RPP Class B Price
in $/MWh



Fiscal Impact ($M)11	2017-18	2018-19
1) Shift Class B DRC to Class A*	197	-197
2) Reduce DRC by $3.50/MWh	148	-
3) Remove DRC completely for Class B	295	-

*** Note:** Estimates assume elimination of DRC is retroactive to January 1, 2017 and could be reflected in bills as early as April 1, 2017. Legislative / regulatory amendments to shift the cost to Class A would come into effect by January 1, 2018.

4. Extend 8% Rebate to Include Class B Consumers

- Ontario currently rebates the provincial portion of the HST from the pre-tax bills of electricity consumers eligible for RPP (e.g., residential, small business and farms) as of January 1, 2017.
- The 8% rebate could be extended beyond RPP eligible consumers to non-RPP Class B.
- Providing the rebate to more consumers would increase the cost by an estimated $770 million per year over the next four years.
  - Fiscal impacts would vary depending on changes in demand from Class B, including consumers that switch from Class A to Class B to take advantage of the rebate, as well as the impact of retail contracts on the total bills of Class B consumers.
- Ministry of Energy would work with the MOF on implementation as necessary.

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
Extend 8% Rebate	-13	-13	-13	-14	-14

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
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  - Lowering corporate taxes for SMEs;
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- Tax-based incentives are offered in a number of jurisdictions such as New York, Minnesota, Iowa and South Carolina to reduce the cost of electricity that retain jobs or are considered electricity intensive.

- Fiscal impacts would vary depending on the design of the strategy. Further analysis would be required on the potential impacts for consumers and the fiscal plan. Ministry of Energy will work with MEDG, TBS and MOF as necessary.

Considerations – Ratepayer / Fiscal Impacts

- Below are estimated ratepayer and fiscal impacts:

Class B Impact ($/MWh)	2017	2018	2019	2020	2021
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Fund a portion of Conservation through GGRA**	-2.5	-2.5	-2.5	-2.5	-2.5
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Extend 8% Rebate	-13	-13	-13	-14	-14
Tax-based Initiatives	TBC	TBC	TBC	TBC	TBC

Fiscal Impact ($M)	2017-18	2018-19	2019-20	2020-21	2021-22
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Fund a portion of Conservation through GGRA**	225-330	225-330	225-330	225-330	225-330
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****Note:** Funding via the Greenhouse Gas Reduction Account (GGRA), estimated impact illustrates the high end of the range.

Considerations

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- GA smoothing accounting / legal analysis is ongoing.

Lower the Cost of Global Adjustment (GA) by Funding a Portion of Conservation Through the GGRA

- It is difficult to quantify the legal risk of a successful constitutional challenge to the cap and trade program associated with a single initiative in isolation. The risk will depend on a holistic assessment of the amount of money deposited into the GGRA and the character of all initiatives supported by cap and trade auction proceeds.

- In principle, there should be only a low risk if the government used cap and trade auction proceeds to defray the ongoing costs of conservation programs currently funded out of the global adjustment mechanism. This is because the programs are collectively expected to reduce CO2 emissions by hundreds of thousands of tonnes each year which seems to fit squarely within the regulatory purpose of the CCMLcE Act.

- However, initiatives which provide a rebate on electricity attract particular scrutiny as they tend to incent consumers to use more rather than less electricity which may frustrate the purpose of the CCMLcE Act. To the extent that funding conservation costs out of the GGRA constitutes a substantial portion of total GGRA spending, it will invite further scrutiny and will increase the legal risk of a successful challenge.

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- There is precedent for removing DRC from electricity consumers' bills. Effective January 1, 2016, DRC was removed for residential electricity bills. However, removing DRC early would only provide Class B consumers relief until April 2018 (i.e., approximately 1-yr of relief).
- Trade implications should be considers.

Extend 8% Rebate to Include Class B Consumers

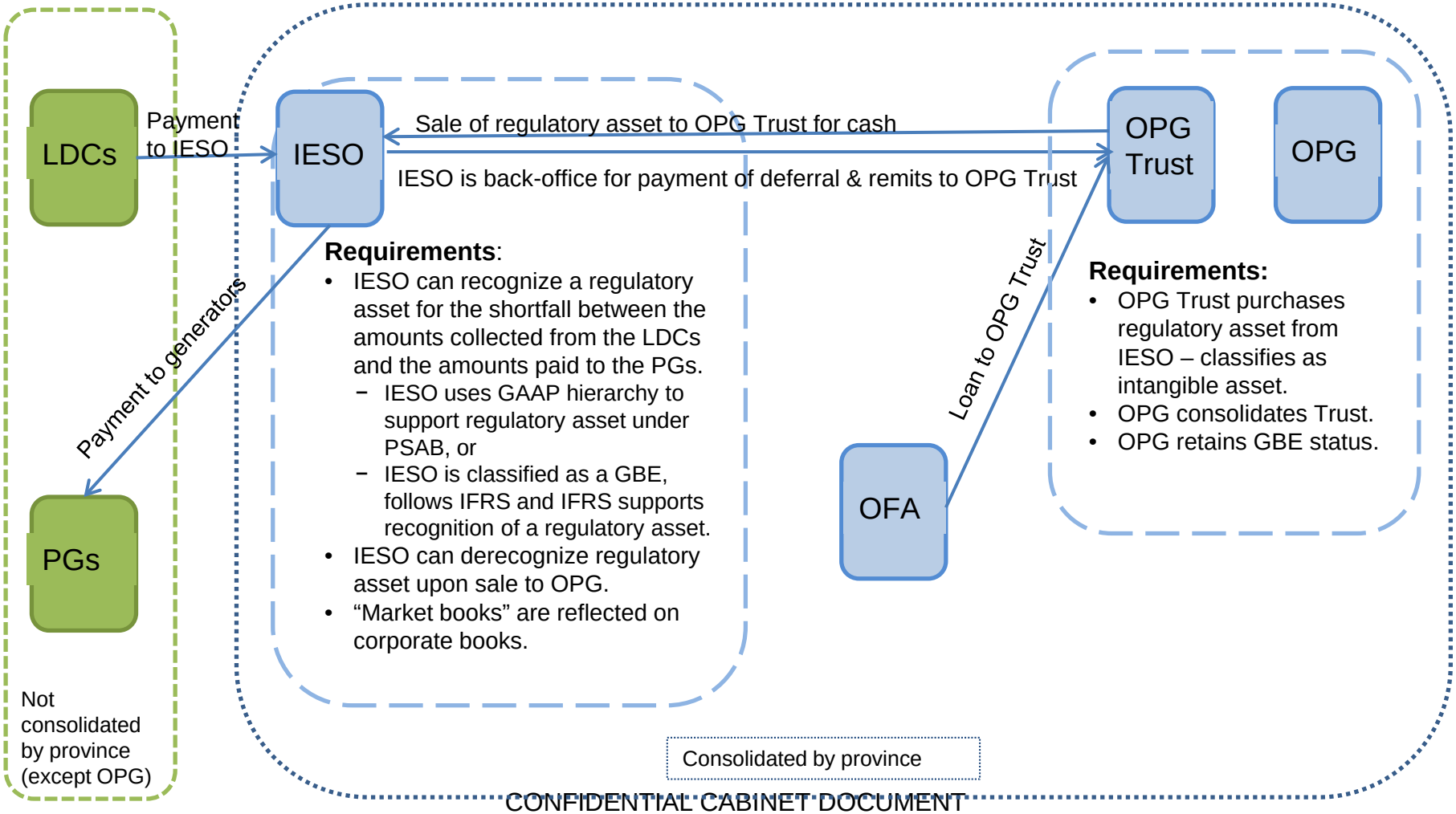
- Trade implications should be considers.

Provide Tax-Based Assistance Package for Class B Consumers (i.e., SMEs)

- The Ministry of Energy would work with MOF and MEDG to develop targeted tax-based credits and initiatives.

GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: Fw: GA Financing Response to Minister"s Request
Date: Tuesday, April 18, 2017 9:36:09 AM
Attachments: GA Financing Response to Minister"s request.pdf

The OFA isn't mentioned in the body of the letter, but given that I'm cc'd with a pretty esteemed list, I'll take that as sufficient.

From: LORD Bernard -BOARDCHAIR
Sent: Tuesday, April 18, 2017 9:10 AM
To: 'glenn.thibeault@ontario.ca'
Cc: Charles Sousa (MOF); Scott Thompson (CAB); Serge Imbrogno (ENERGY); Gadi Mayman; LYASH Jeffrey -PRESIDENT; HARTWICK Ken -FINANCE; GINTHER Chris -CAO; KING Catriona -OFFCORPSEC; MATHIAS Carlton -OFFCORPSEC
Subject: GA Financing Response to Minister's Request

Hello,
Please see the attached letter from Bernard Lord, Board Chair Ontario Power Generation.
Thanks,

Rosemarie
Rosemarie Hoilett
Executive Assistant - Jeff Lyash President & CEO | Bernard Lord Board Chair
Ontario Power Generation
700 University Ave | H19-A24
Toronto ON M5G 1X6
416-592-2114 | rosemarie.hoilett@opg.com

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ONTARIO POWER GENERATION

Bernard Lord
Board Chair

700 University Ave, Toronto, ON M5G 1X6

Tel: 416-592-2115
bernard.lord@opg.com

April 18, 2017

The Honourable Glenn Thibeault
Minister of Energy
4th Floor, Hearst Block
900 Bay Street
Toronto, Ontario
M7A 2E1

Dear Minister Thibeault,

I am writing in response to your letter dated April 13, 2017, in which you requested OPG work with the Ministry of Energy, the IESO and the OEB and their respective advisors to consider and propose a financing plan to refinance the Global Adjustment in a manner that achieves the Province's price objectives, as outlined in the Premier's March 2, 2017 announcement.

As requested, OPG is working with the Ministry of Energy, the IESO and the OEB and their respective advisors to develop a plan that will incorporate the matters you identified, including potential structures and mechanisms that permit viable financing, sources of financing and required changes to legislation, regulations and OPG's constating documents to facilitate the implementation of the financing plan in a commercial manner. The plan will also include assurances that implementation of the financing plan will have no adverse impacts on OPG, its operating assets or the manner in which they are regulated. I note the Province's commitment to provide OPG with the necessary assurances with respect to recovery of the principal, interest, and operating and other costs of any financing. This will be an important consideration for the OPG Board.

OPG has engaged financial and legal advisors with significant capital markets expertise, including experience in the United States where a number of state-owned utilities have put in place highly rated financing for costs that are to be recovered over a long period of time. Work on OPG's financing plan is being guided by these advisors and precedents.

The Board will provide you with our recommendation and plan in the timeframe requested.

Sincerely,

Bernard Lord
Board Chair

cc: The Honourable Charles Sousa, Minister of Finance
Scott Thompson, Deputy Minister of Finance
Serge Imbrogno, Deputy Minister of Energy
Gadi Mayman, CEO, Ontario Financing Authority
Jeff Lyash, President and CEO, Ontario Power Generation

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ONTARIO POWER GENERATION

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Board Chair

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The Board will provide you with our recommendation and plan in the timeframe requested.

Sincerely,

Bernard Lord
Board Chair

cc: The Honourable Charles Sousa, Minister of Finance
Scott Thompson, Deputy Minister of Finance
Serge Imbrogno, Deputy Minister of Energy
Gadi Mayman, CEO, Ontario Financing Authority
Jeff Lyash, President and CEO, Ontario Power Generation

From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning; Ronald Kwan
Cc:	Anna Strathy
Subject:	Fw: Guarantee
Date:	Friday, April 21, 2017 2:40:35 PM
Attachments:	Guarantees.docx

I don't think the original email I sent to you had this attachment.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:33 PM
To: Gadi Mayman; anna.strathy@ofina.ca
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF)
Subject: FW: Guarantee

Hi Gadi, Anna,
We had a call with Carolyn Calwell and Paul Johnson at Energy Legal.
Please find attached a summary description of the guarantee for a number of obligations related to the proposed transaction that is being requested by OPG's investment dealers. There are 2 guarantees being requested: a guarantee of payment in certain situations as well as a performance guarantee. Although the Province has provided payment guarantees in the past, I am not aware of the Province provided guarantees of performance so this would be a new type of guarantee. We understand that these guarantees would have to be authorized by the proposed legislation so the wording of the authorizing sections needs to be worked on. Right now the section is very general and doesn't yet include the word "guarantee". Also there should be some wording around the type or scope of the guarantee or what it is in relation to. As well, I am assuming that payment under the guarantee would have to be a charge on the CRF in order to provide sufficient support. I am not sure whether the Province's liability under these guarantees can be capped. Also I understand there is a section in the proposed legislation indicating s. 28 FAA does not apply so this is something for us to consider too.
I understand that Tory's (OPG's counsel) is working on a first draft of the guarantee, but it does not appear that the scope of the guarantee would be settled before legislation is introduced.
I don't' know if you have seen the attached document previously. Who would you like us to speak to at the OFA about this proposal?
Thanks.
Malle
Malle Hanslep
Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
Notice: This communication may be solicitor/client privileged and contain confidential information intended only for the person(s) to whom it is addressed. If you have received this message in error please notify the writer and permanently delete the message and all attachments. Thank you.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 12:49 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle, can we give you a call around 1:30? In the meantime, I attach a summary prepared by the investment dealers (CIBC, Goldman) advising OPG of the types of guarantees that they are expecting to see as part of this proposal.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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There are two types of "guarantees" that we are looking for from the Province in relation to this program on the basis that any debt issued under the Fair Hydro Program will be AAA-rated. The following is based on the understanding that charges collected from prescribed consumers will be subject to a moratorium during the first 5 years of the program which results in interest and other on-going expenses of the financing entity not being recovered from ratepayers during this initial 5 year period.

The legislation must include a specific reference to the Province being required to provide a guarantee on debt repayment and servicing in certain circumstances.

The first is a "Springing Guarantee", which would be via a legal agreement put in place when establishing the program and would require the Province to step in and assume responsibility for paying all amounts that are or become due in respect of (i) any of the outstanding funding obligations; (ii) the operation and maintenance of the financing entity; and (iii) any other amounts due in relation to the program that have not yet been paid (collectively, the "Fair Hydro Program Costs"). This Springing Guarantee would kick in should any of the following happen:

(1) There is any change in the legislation or regulations that is, or could be, adverse to finance entity noteholders or the legislation is determined to be *ultra vires*. In this situation, the Springing Guarantee would require the immediate repayment of all Fair Hydro Program Costs (including any makewhole prepayment obligations).

(2) There is a market disruption (i.e. there is a period of time when capital markets term funding is not available to take out the warehouse facilities (bank facility or ABCP)). In this situation, either (i) we must have the ability to recover amounts relating to principal recoveries by invoicing and collecting clean energy adjustments, regardless of whether this is during the first 5 or 10 years of the program; or (ii) the Province must be responsible for the immediate repayment of those warehouse facilities. In respect of clause (2)(i), those clean energy adjustments could either be passed on to the ratepayers, or be funded by an incremental IESO shortfall or servicer advance (which in turn, could be funded by the Province).

The period of time that must lapse before this Springing Guarantee becomes applicable with respect to the warehouse facilities can be set to accommodate a short term dislocation in the term funding market (6-18 months). We would note that depending on the size of the warehouse facility, if there is no term takeout for an extended period of time, it is likely that the warehouse facilities will also quickly reach their credit limits and the province would likely have to fund any future shortfalls if they wished to continue the program.

To the extent that the Springing Guarantee does not require the Province to make the repayment contemplated under scenario (1), but simply requires the Province to repay the debt in accordance with its original repayment terms, this may adversely impact the rating of the Fair Hydro Program.

The second type of guarantee we are looking for from the Province is a performance guarantee. This is not a credit guarantee. The performance guarantee would require the Province to stand behind certain of the servicing obligations in the program. Typically, if there is a situation where a servicer does not perform all of the duties themselves, but delegates some of

their activities to a sub-servicer or agent, the servicer would retain responsibility for duties performed by those delegates. Our understanding is that IESO will only be acting as agent in this transaction, so this standard will not be in place with respect to IESO or the LDC's. To address this risk, we would be looking for a performance guarantee to be included as part of the documents for the program which would cover any of the servicing and collection activities, regardless of whether those were performed by IESO, as initial servicer, a replacement servicer or an LDC. The performance guarantee would, amongst other things, require the Province to stand behind (including taking responsibility for helping remedy any breaches in) the representations, warranties and covenants made be the servicer and the servicer's or LDCs' obligations to collect and remit clean energy adjustments. It would also require the Province to ensure that the servicer and, if applicable, LDC, performs their servicing activities as set out in the securitization documents and if they do not, put in place an alternative servicer who would perform those servicing activities. Subject to confirmation with the rating agencies, the performance guarantee should also address commingling risk during each month. Typically, as long as the performance guarantor maintains an acceptable rating (at or slightly above investment grade), cash collections should be permitted to be commingled each month until remitted to the Financing Entity with the Province taking responsibility for the commingling risk (i.e. the Province would be required to remit if there were amounts collected and commingled, but not received by the Financing Entity). Our understanding is that the LDCs will be performing certain servicing and collection activities which we would describe in the legal agreements, but we are not expecting the LDCs be parties to the agreements themselves. The performance guarantee would need to cover activities performed by the LDCs, as well as the servicer, including any cash collected but not remitted to the Financing Entity. The performance guarantee would also include the Province standing behind any other potential liabilities arising from the performance of such servicing obligations by the parties involved in servicing these investment assets on behalf of the Financing Entity.

From:	Gadi Mayman
To:	Mike Manning; Ken Kandeepan; Ronald Kwan
Cc:	Anna Strathy
Subject:	Fw: Guarantee
Date:	Friday, April 21, 2017 2:39:42 PM
Attachments:	LAWS OF THE STATE OF NEW YORK - CHAPTER 173 OF 2013.docx summary of securitization provisions in LIPA Reform Act.docx Summary of Duke Energy Securitization.docx Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf Moody"s - Duke Energy Florida Project Finance, LLC Series A Bonds.pdf S&P - List of S&P Rated Stranded Cost Transactions (2013).pdf S&P - Securitizing Stranded Costs_S&P Criteria (2001).pdf Fair Hydro Plan Act (April 20 2017) Consultation v3.docx

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From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:38 PM
To: Gadi Mayman; Anna Strathy
Cc: Tobias P. Whitfield (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Some more information sent by Carolyn.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

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416-326-7918

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ASSEMBLY BILL #**A8073** SAME AS SENATE BILL #**S5844**

LAWS OF NEW YORK, 2013

CHAPTER 173

AN ACT to amend the public service law, the public authorities law, the executive law and the education law, in relation to the powers and duties of the department of public service and the Long Island power authority; to repeal subdivision (u) of section 1020-f of the public authorities law relating to general powers of the authority; and providing for the repeal of certain provisions upon expiration thereof (Part A); and in relation to the issuance of securitized restructuring bonds to refinance the outstanding debt of the Long Island power authority (Part B)

Became a law July 29, 2013, with the approval of the Governor.
Passed by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. This act enacts into law major components of legislation relating to issues deemed necessary by the state. Each component is wholly contained within a Part identified as Parts A through B. The effective date for each particular provision contained within such Part is set forth in the last section of such Part. Any provision in any section contained within a Part, including the effective date of the Part, which makes reference to a section "of this act", when used in connection with a particular component, shall be deemed to mean and refer to the corresponding section of the Part in which it is found.

Section three of this act sets forth the general effective date of this act.

PART A

Section 1. Section 3 of the public service law, as amended by chapter 8 of the laws of 2012, is amended and a new section 3-b is added to read as follows:

§ 3. Department of public service. [~~1.~~] There shall be in the state government a department of public service. The chairman of the public service commission shall be the chief executive officer of the department. He or she shall appoint and shall have the power to remove, subject to the provisions of the civil service law, all officers, clerks, inspectors, experts and employees of the department, and to approve all contracts for special service. The chairman shall designate one of the commissioners in the department or an officer of the department to act as deputy chairman during the absence or disability of the chairman and during such times such deputy chairman shall possess all the powers of the chairman as chief executive officer of the department.

[~~2. The department shall, upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of said authority pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or~~

EXPLANATION--Matter in ***italics*** is new; matter in brackets [-] is old law

to be omitted.

~~CHAP. 173 2~~

~~by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the Long Island power authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department according to such terms as the department may determine are necessary and reasonable.~~]

§ 3-b. Long Island office of the department.

1. There is hereby established in the department an office to review and make recommendations with respect to the operations and terms and conditions of service of, and rates and budgets established by, the Long Island power authority and/or its service provider.

2. Definitions. As used or referred to in this section:

(a) "Authority" means the Long Island power authority.

(b) "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract. However, the service provider and any affiliate of the service provider with whom the authority or service provider contracts to provide services associated with the authority's electric transmission and distribution system shall not be considered an electric corporation under this chapter.

(c) "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the Long Island power authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

3. General powers. In undertaking the requirements of this section, subject to subdivisions (u) and (bb) through (hh) of section one thousand twenty-f of the public authorities law, the department shall be empowered and authorized to:

(a) Review and make recommendations to the board of the Long Island power authority with respect to the rates and charges, including charges related to energy efficiency and renewable energy programs, to be established by the authority and become applicable on or after January first, two thousand sixteen pursuant to subdivision (u) of section one thousand twenty-f of the public authorities law.

(i) The purpose of such review is to make recommendations designed to ensure that the authority and the service provider provide safe and adequate transmission and distribution service at rates set at the lowest level consistent with sound fiscal operating practices.

(ii) The department's recommendations shall be designed to be consistent with ensuring that the revenue requirements related to such rate review are sufficient to satisfy the authority's obligations with respect to its bonds, notes and all other contracts.

(iii) In the context of such review, the department may not make any recommendation that would modify the compensation or fee structure included within the operations services agreement.

(iv) In undertaking such review and in making recommendations related to the proposed rates and charges, the department shall establish standards,

policies and procedures that, at a minimum, provide for public statement and evidentiary hearings and participation of intervenors and other parties, and ensure that any final recommendations related to the proposed rates and charges are provided to the authority within two hundred forty days of the filing with the department of such plan.

(v) The parties to any such rate review proceeding shall include, but not be limited to, department staff, the authority, the service provider and, to the extent it deems necessary or appropriate, the utility intervention unit.

(b) Review the annual capital expenditures proposed by the service provider and recommend such improvement in the manufacture, conveying, transportation, distribution or supply of electricity, or in the methods employed by the service provider as in the department's judgment allows for safe and adequate service.

(c) Annually review the emergency response plan of the authority and the service provider in accordance with the following requirements:

(i) Examine and determine whether the emergency response plan is consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of this chapter and any regulations or orders promulgated thereto, and to recommend amendments of same; and

(ii) Review and make recommendations to the authority with respect to the performance of the service provider in restoring service or otherwise meeting the requirements of the emergency response plan during an emergency event, defined for purposes of this section as an event where widespread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and its service provider, including making determinations with respect to whether the service provider is reasonably able to implement the emergency response plan, whether the length of any outages related to such emergency were materially longer than they would otherwise have been because the service provider failed to reasonably implement the emergency response plan, the reasonableness of costs associated with such emergency response, the costs, if any, that were unreasonably and imprudently incurred by the service provider, and whether the service provider would be liable for any such costs pursuant to the terms and conditions of the operations services agreement.

(d) Upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of the authority and service provider pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department

according to such terms as the department may determine are necessary and reasonable.

(e) Accept, investigate, mediate to resolve and make recommendations to the Long Island power authority and/or the service provider regarding the resolution of complaints from consumers in the authority's service

territory relating to, among other things, the provision of electric service provided by the service provider and/or the authority.

(f) Review the net metering program implemented under subdivision (h) of section one thousand twenty-g of the public authorities law and make recommendations designed to ensure consistency with the requirements of sections sixty-six-j and sixty-six-l of this chapter, and any regulations and orders adopted thereto.

(g) Review and make recommendations with respect to any proposed plan submitted by the Long Island power authority and/or the service provider related to implementation of energy efficiency measures, distributed generation or advanced grid technology programs having the purpose of providing customers with tools to more efficiently and effectively manage their energy usage and utility bills, and improving system reliability and power quality.

(h) Review the data, information and reports submitted pursuant to subdivision (hh) of section one thousand twenty-f of the public authorities law and other pertinent information related to the metrics in the operations services agreement, the Long Island power authority's evaluation of such data, information and reports, and make recommendations to the authority with respect to the service provider's annual incentive based compensation within thirty days of receipt of such evaluation and information.

4. Review and inspection. To undertake the requirements of subdivision two of this section, the department shall be authorized to inspect all premises and facilities owned or operated by the authority and the service provider, review all books and records of the authority and the service provider, interview all appropriate personnel, and require annual reporting consistent with the requirements of subdivision six of section sixty-six of this chapter and any regulations and orders adopted thereto; provided, however, that this authority shall not extend to affiliates of the service provider.

§ 2. Subdivision 2 and paragraph (b) of subdivision 6 of section 18-a of the public service law, subdivision 2 as amended by section 2 of part NN of chapter 59 of the laws of 2009 and paragraph (b) of subdivision 6 as amended by section 1 of part BB of chapter 59 of the laws of 2013, are amended and a new subdivision 1-a is added to read as follows:

1-a. All costs and expenses of the department related to the department's responsibilities under section three-b of this chapter shall be paid pursuant to appropriation on the certification of the chairman of the department and upon the audit and warrant of the comptroller. For the state fiscal year beginning on April first, two thousand fourteen and each state fiscal year thereafter, payments are to be made from all moneys collected from the Long Island power authority pursuant to this section. The total of such costs and expenses shall be assessed on such authority in the manner provided in subdivisions two, three and four of this section.

2. (a) The chairman of the department shall estimate prior to the start of each state fiscal year the total costs and expenses, including the compensation and expenses of the commission and the department, their officers, agents and employees, and including the cost of retirement contributions, social security, health and dental insurance, survivor's benefits, workers' compensation, unemployment insurance and other fringe

benefits required to be paid by the state for the personnel of the commission and the department, and including all other items of maintenance and operation expenses, and all other direct and indirect costs. Based on such estimates, the chairman shall determine the amount

to be paid by each assessed public utility company **and the Long Island power authority** and a bill shall be rendered to each such public utility company **and authority**.

(b) The bill for each public utility company **and the Long Island power authority** shall be rendered on or before February first preceding each fiscal year, and shall be for the amount equal to the product of the aforesaid estimated costs and expenses of conducting the department's and commission's total operations during the fiscal year for which billing is being made multiplied by the proportion which compares:

(1) the gross operating revenues, over and above five hundred thousand dollars, for that utility company **or the authority** derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman, to:

(2) the total of the gross operating revenues, derived from intrastate utility operations for all utility companies **and the authority** in the state which revenues are included under subparagraph one of this paragraph.

For the purposes of calculating the commodity cost component of its gross operating revenue, where the utility delivers to end-use customers electricity and/or natural gas commodities that are sold to such customers by a third party, such utility shall include in its revenues an estimate of the sales revenue for the electric and/or natural gas commodities that it delivers, including all such commodities sold to end-use customers by third parties, in such manner as to assure that all end-use delivery customers, regardless of the entity from which they purchase their electric and/or natural gas commodities, bear a fair and proportionate share of the assessment imposed herein, as the commission may determine.

(c) The minimum assessment for any utility company**, as well as the Long Island power authority,** whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

(d) The amount of such bill for fiscal years beginning on or after April first, nineteen hundred eighty-three so rendered shall be paid by such public utility company **and such authority** to the department on or before April first; provided, however, that [~~a~~] **any such** utility company **or such authority** may elect to make partial payments for such costs and expenses on March tenth of the preceding fiscal year and on September tenth of such fiscal year. Each such partial payment shall be a sum equal to fifty percentum of the estimate of costs and expenses to be assessed against such utility company **or authority** under the provisions of this subdivision and shall not be less than two hundred dollars.

(e) During the course of any state fiscal year, the chairman may increase or decrease the estimate of costs and expenses. In such case, revised bills shall be sent to each public utility company **and such authority**, and such increase or decrease shall be equally apportioned against the remaining payments for such fiscal year.

(f) On or before October tenth of each year, the chairman shall compute the actual costs and expenses of the department and the commission and adjustments or other corrections as needed for the preceding state fiscal year and, after deducting the amounts recovered pursuant to subdivisions three and four of this section, shall, on or before October twentieth, send to each public utility company **and/or the authority** affected thereby a

statement setting forth the amount due and payable by, or the amount standing to the credit of, such public utility company **and/or the authority**. Any amount owing by any public utility company

and/or the authority shall be paid not later than thirty days following the date such statement is received. Any such amount standing to the credit of any public utility company shall be refunded by the commission or, at the option of such utility company, shall be applied as a credit against any succeeding payment due.

(g) The total amount which may be charged to any public utility company **and the Long Island power authority** under authority of this subdivision for any state fiscal year shall not exceed one per centum of such public utility company's **or authority's** gross operating revenues derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman; provided, however, that no corporation or person that is subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the general assessment provided for under this subdivision.

Notwithstanding the provisions of subdivision one of this section, for telephone corporations as defined in subdivision seventeen of section two of this article, the total amount which may be charged such corporations for department expenses under the authority of subdivision one of this section for any state fiscal year shall not exceed one-third of one percentum of such corporation's gross operating revenue, over and above five hundred thousand dollars, derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman.

(h) On-bill recovery charges billed pursuant to section sixty-six-m of this chapter shall be excluded from any determination of an entity's gross operating revenues derived from intrastate utility operations for purposes of this section.

(b) The temporary state energy and utility service conservation assessment shall be based upon the following percentum of the utility entity's gross operating revenues derived from intrastate utility operations in the last preceding calendar year, minus the amount, if any, that such utility entity is assessed pursuant to subdivisions one and two of this section for the corresponding state fiscal year period: (1) two percentum for the state fiscal year beginning April first, two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) one and three-quarters percentum for the state fiscal year beginning April first, two thousand fifteen; and (3) one and one-half percentum for the state fiscal year beginning April first, two thousand sixteen. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, utility entities shall make a payment equal to one-half of the assessment paid by such entities pursuant to this paragraph for the state fiscal year beginning on April first, two thousand sixteen. With respect to the Long Island power authority, the temporary state energy and utility service conservation assessment shall be based upon the following percentum of such authority's gross operating revenues derived from intrastate utility operations in the last preceding calendar year**, minus the amount, if any, that such authority is assessed pursuant to subdivisions one-a and two of this section for the corresponding state fiscal year period**: (1) one percentum for the state fiscal year beginning April first,

two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) three- quarters of one percentum for the state fiscal year beginning April

first, two thousand fifteen; and (3) one-half percentum for the state fiscal year beginning April first, two thousand sixteen**; provided, however, that should the amount assessed by the department for costs and expenses pursuant to such subdivisions equal or exceed such authority's temporary state energy and utility service conservation assessment for a particular fiscal year, the amount to be paid under this subdivision by such authority shall be zero**. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, the Long Island power authority shall make a payment equal to one-half of the assessment it paid for the state fiscal year beginning on April first, two thousand sixteen. No corporation or person subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the temporary state energy and utility service conservation assessment provided for under this subdivision. Utility entities whose gross operating revenues from intrastate utility operations are five hundred thousand dollars or less in the preceding calendar year shall not be subject to the temporary state energy and utility service conservation assessment. The minimum temporary state energy and utility service conservation assessment to be billed to any utility entity whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

§ 3. Section 1020-b of the public authorities law is amended by adding two new subdivisions 23 and 24 to read as follows:

23. "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract.

24. "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

§ 4. Section 1020-d of the public authorities law, as added by chapter 506 of the laws of 1995, is amended to read as follows:

§ 1020-d. [~~Trustees~~] **Board of trustees**.

1. [~~The~~] **Starting on January first, two thousand fourteen, the board of the** authority shall **be constituted and** consist of [~~fifteen~~] **nine** trustees all of whom shall be residents of the service area, [~~nine~~] **five** of whom shall be appointed by the governor, one of whom the governor shall designate as [~~chairman~~] **chair**, and serve at his **or her** pleasure, [~~three~~] **two** of whom shall be appointed by the temporary president of the senate, and [~~three~~] **two** of whom shall be appointed by the speaker of the assembly. [~~Two~~] **One** of the governor's appointees shall serve an initial term of [~~one year~~] **two years**; [~~two~~] **one** of the governor's appointees shall serve an initial term of [~~two~~] **three** years; [~~two~~] **and three** of the governor's appointees shall serve an initial term of [~~three~~] **four** years[~~; and three of the governor's appointees shall serve an initial term of four years~~]. [~~Two~~] **One** of the appointees of the temporary president of the senate and [~~two~~] **one** of the appointees of the speaker of the assembly shall serve initial terms of [~~one year~~] **two years**;

and one appointee of the temporary president of the senate and one appointee of the speaker of the assembly shall serve initial terms of [~~two~~] **three** years. Thereafter, all terms

shall be for a period of four years. In the event of a vacancy occurring in the office of trustee by death, resignation or otherwise, the respective appointing officer shall appoint a successor who shall hold office for the unexpired portion of the term.

2. No trustee shall receive a salary, but each shall be entitled to reimbursement for reasonable expenses in the performance of duties assigned hereunder.

3. Notwithstanding the provisions of any other law, no trustee, officer or employee of the state, any state agency or municipality appointed a trustee shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of a trusteeship on the authority, his or her service thereon or his or her employment therewith.

4. All trustees appointed under this section shall have relevant utility, corporate board or financial experience.

§ 5. On or before December 1, 2013 the governor, the temporary president of the senate and the speaker of the assembly shall choose and announce their appointments to the board of the Long Island power authority to be made pursuant to section 1020-d of the public authorities law, as amended by section four of this act, giving due consideration to continuity of business. The board of trustees of the Long Island power authority in existence on December 31, 2013, shall be abolished on such date and be constituted on January 1, 2014 pursuant to section 1020-d of the public authorities law, as amended by section four of this act.

§ 6. Subdivision (u) of section 1020-f of the public authorities law is REPEALED.

§ 7. Subdivisions (c) and (bb) of section 1020-f of the public authorities law, subdivision (c) as amended by chapter 506 of the laws of 2009 and subdivision (bb) as added by chapter 8 of the laws of 2012, are amended and seven new subdivisions (u), (cc), (dd), (ee), (ff), (gg) and (hh) are added to read as follows:

(c) To appoint officers, agents and employees, without regard to any personnel or civil service law, rule or regulation of the state and in accordance with guidelines adopted by the authority, prescribe their duties and qualifications and fix and pay their compensation [~~**, provided, however, that the appointment of the chief executive officer shall be subject to confirmation by the senate in accordance with section twenty-eight hundred fifty-two of this chapter;**~~]**. By January first, two thousand fourteen, the authority, through its governance committee, shall amend such guidelines to require that staffing at the authority is kept at levels only necessary to ensure that the authority is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and oversee the activities of the service provider**;

(u) Rate plans. Subject to subdivision six of section one thousand twenty-k of this title to fix rates and charges for the furnishing or rendition of gas or electric power or of any related service at the lowest level consistent with sound fiscal and operating practices of the authority and which provide for safe and adequate service. In implementing this power:

1. The authority and the service provider shall, on or before February first, two thousand fifteen, submit for review to the department of public service a three-year rate proposal for rates and charges to take effect on or after January first, two thousand sixteen.

2. The authority and the service provider shall thereafter submit for review to the department of public service any rate proposal that would increase the rates and charges and thus increase the aggregate revenues of the authority by more than two and one-half percent to be measured on an annual basis; provided, however, that the authority may place such rates and charges into effect on an interim basis, subject to prospective rate adjustment; provided, further, that a final rate plan issued by the authority that would not so increase such rates and charges shall not be subject to the requirements of paragraph four of this subdivision and shall be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The authority and/or the service provider may otherwise submit for review to such department any rate proposal irrespective of its effect on revenues.

3. The authority shall not fix any final rates and charges proposed that would not be subject to review by the department of public service pursuant to paragraphs one and two of this subdivision until after holding public hearings thereon upon reasonable public notice, with at least one such hearing to be held each in the county of Suffolk and the county of Nassau.

4. Any recommendations associated with a rate proposal submitted pursuant to paragraphs one and two of this subdivision shall be provided by the department of public service to the board of the authority immediately upon their finalization by the department. Unless the board of the authority makes a preliminary determination in its discretion that any particular recommendation is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligations, or the provision of safe and adequate service, the board shall implement such recommendations as part of its final rate plan and such final determination shall be deemed to satisfy the requirements of this subdivision and be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The board shall make any such preliminary determination of inconsistency within thirty days of receipt of such recommendations, with notice and the basis of such determination being provided to the department of public service, and contemporaneously posted on the websites of the authority and its service provider. The board shall thereafter, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency.

At such hearing, the department of public service shall present the basis for its recommendations, the board shall present the basis for its determination of inconsistency and the service provider may present its position. The authority and the service provider may, during the time period before such public hearing reach agreement with the department on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementation with respect to any such recommendations. The authority's final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(bb) Comprehensive and regular management and operations audits.

1. The authority **and the service provider** shall cooperate in the undertaking and completion of a regular and comprehensive management and operations audit conducted pursuant to the requirements of this subdivision and [~~subdivision two of section three~~] **paragraph (d) of subdivision three of section three-b** of the public service law. Such audit shall review and evaluate the [~~authority's~~] overall operations and management

of the authority and service provider, including [~~the authority's~~] such operations and management in the context of [~~its~~] the authority's duty to set rates at the lowest level consistent with standards and procedures provided in subdivision (u) of this section, and include, but not be limited to: (i) the [~~authority's~~] service provider's construction and capital program planning in relation to the needs of [~~its~~] customers for reliable service; (ii) the overall efficiency of the authority's and service provider's operations; (iii) the manner in which the authority is meeting its debt service obligations; (iv) the authority's Fuel and Purchased Power Cost Adjustment clause and recovery of costs associated with such clause; (v) the authority's and service provider's annual budgeting procedures and process; (vi) the application, if any, of the performance metrics designated in the operations services agreement and the accuracy of the data relied upon with respect to such application; and [~~(vi)~~] (vii) the authority's compliance with debt covenants.

2. The department of public service shall notify the authority that said department is in the process of initiating a comprehensive management and operations audit as described in paragraph one of this subdivision in a manner that ensures the timeliness of such audit, and in accordance with the following timeframe: the first comprehensive management and operations audit shall be initiated as of the effective date of [~~this subdivision~~] chapter eight of the laws of two thousand twelve and undertaken in a manner and to an extent that is practicable in the context of the authority's transition to a new management service structure; the second comprehensive management and operations audit shall be initiated no later than December fifteenth, two thousand [~~fifteen~~] sixteen; and all additional comprehensive management and operations audits shall be initiated at least once every five years thereafter.

Within a reasonable time after such notification to the authority, said department or the independent auditor retained by the authority to undertake such audit shall hold public statement hearings, with proper notice, in both Nassau and Suffolk counties for the purpose of receiving both oral and written comments from the public on matters related to such audit as described in paragraph one of this subdivision.

3. Each such audit shall be completed within eighteen months of initiation absent an extension for good cause shown by the department of public service or the independent auditor under contract with the authority with notice of such extension to the governor, the temporary president of the senate, the speaker of the assembly, and the chairs of the authority and the department of public service. Such audit shall be provided to the board of the authority immediately upon its completion.

The department of public service shall provide notice of completion of such audit to the governor, the temporary president of the senate, the speaker of the assembly, and the minority leaders of the senate and assembly, and the authority, upon receipt of such audit, shall post a copy of such audit, including findings and recommendations, on its website and the website of the service provider. Unless the board of the authority makes a preliminary determination that any particular finding or recommendation contained in such audit is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligation, or the provision for safe and adequate service, the board shall implement or cause its service provider to implement such findings and recommendations in accordance with the timeframe specified under such audit.

4. The board of the authority shall make any preliminary determination of inconsistency with respect to any such finding or recommendation

within thirty days of receipt of the audit, with notice and the basis of such determination being provided to the department of public service.

Such notice and basis shall be posted contemporaneously on the authority's website **and the website of the service provider** and the board shall, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency. At such hearing the department of public service or the independent auditor responsible for undertaking such audit shall present the basis for its findings and recommendations and the board shall present the basis for its determination of inconsistency **and the service provider may present is position**. The authority**, service provider** and auditor may during the time period prior to such public hearing reach agreement on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementations with respect to any such findings and/or recommendations. The [~~**board's**~~] **authority's** final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(cc) To prepare an emergency response plan pursuant to this subdivision. 1. The service provider shall, in consultation with the authority, prepare and maintain an emergency response plan (i) to assure the reasonably prompt restoration of service in the case of an emergency event, defined for purposes of this subdivision as an event where wide-spread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and the service provider, (ii) consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of the public service law and any regulations and orders adopted thereto, and (iii) establishing the separate responsibilities of the authority and service provider.

2. On or before February third, two thousand fourteen, the authority and service provider shall submit an emergency response plan to the department of public service for review. Contemporaneously with such submission, the authority shall provide notice of such proposed plan to the secretary of state for publication in the state register, the authority and service provider each shall post such plan on their websites and otherwise make such plan available for review in-person, and afford members of the public an opportunity to submit written comments and oral comments pursuant to at least one hearing to be held each in the county of Suffolk and the county of Nassau. Such written comments must be submitted by March fourteenth, two thousand fourteen.

The authority and service provider shall provide a copy of all written comments they receive and a transcript of such public hearings to the department of public service for its consideration in reviewing the emergency response plan. The department shall provide any recommendations to the authority and service provider with respect to such plan on or before April fifteenth, two thousand fourteen. Such plan must be made final by June second, two thousand fourteen. For each year thereafter, the service provider shall submit an emergency response plan to the department of public service, and such department shall provide its recommendations, in accordance with a schedule to be established by such department and that is consistent with the schedule associated with such department's review of similar such plans provided by electric corporations pursuant to subdivision twenty-one of section sixty-six of the public service law.

3. By June second, two thousand fourteen, and by June first annually thereafter, the authority and service provider shall jointly certify to the department of homeland security and emergency services that the emergency response plan ensures, to the greatest extent feasible, the timely and safe restoration of energy services after an emergency consistent with the requirements of paragraph (a) of subdivision twenty-one of the public service law and the department's recommendations. The filing of such emergency response plan shall also include a copy of all written mutual assistance agreements among utilities. The authority and service provider shall file with the county executives of Nassau and Suffolk county and the mayor of the city of New York the most recent version of the emergency response plan, and make sure that such amended versions are timely filed.

4. Starting in calendar year two thousand fourteen, the service provider annually shall undertake at least one drill to implement procedures to practice its emergency response plan. The service provider shall notify and allow participation in such drill of all appropriate municipal emergency responders and officials.

5. If, during an emergency event, electric service is not restored in three days, the service provider shall within sixty days from the date of full restoration file with the department a report constituting a review of all aspects of the preparation and system restoration performance during the event, and shall thereafter take into consideration any recommendations made by the department associated with such review.

(dd) On or before January first, two thousand fifteen, and by January first of each calendar year thereafter, to submit for review to the department of public service a report detailing the service provider's planned capital expenditures.

(ee) On or before July first, two thousand fourteen, and annually thereafter, to submit for review to the department of public service any proposed plan related to implementing energy efficiency measures, distributed generation or advanced grid technology programs for the purpose provided pursuant to paragraph (g) of subdivision three of section three-b of the public service law.

(ff) To assist and cooperate with the department of public service with respect to any review undertaken pursuant to section three-b of the public service law, including providing the department with reasonable access to all facilities and premises owned or operated by the authority or its service provider, allowing review of all books and records of the authority and its service provider, providing copies of requested documents, allowing interviews of all appropriate personnel, and responding in a reasonable and timely manner to any inquiries or reporting requests made by the department; provided, however, that the obligations set forth in this subdivision shall not extend to affiliates of the service provider.

(gg) Renewable generation and energy efficiency programs. 1. The authority in coordination with the service provider, the power authority of the state of New York and the New York state energy research and development authority shall, to the extent the authority's rates are sufficient to provide safe and adequate transmission and distribution service, and the measures herein, undertake actions to design and administer renewable energy and energy efficiency measures in the service area, with the goal of continuing and expanding such measures that cost-effectively reduce system-wide peak demand, minimize long-term fuel price risk to rate payers, lower emissions, improve environmental quality, and seek to meet New York state climate change and environmental

goals. Such actions shall also include implementation of any renewable energy competitive procurement or feed-in-tariff programs that were approved by the authority as of the effective date of the chapter of the laws of two thousand thirteen which added this subdivision.

2. The service provider shall consider, consistent with maintaining system reliability, renewable generation and energy efficiency program results and options in establishing capital plans.

(hh) Starting in calendar year two thousand fifteen, the authority and the service provider shall submit to the department of public service for review, any and all data, information and reports which set forth the service provider's actual performance related to the metrics in the operations services agreement, including the authority's evaluation thereof, no less than forty-five days prior to the authority's determination of the service provider's annual incentive compensation.

§ 8. Section 1020-q of the public authorities law, as added by chapter 517 of the laws of 1986 and subdivision 2 as amended by section 19 of part Y of chapter 63 of the laws of 2000, is amended to read as follows:

§ 1020-q. Payments in lieu of taxes. 1. Each year after property theretofore owned by LILCO is acquired by the authority by any means authorized by this title and, as a consequence, is removed from the tax rolls, the authority shall make payments in lieu of taxes to municipalities and school districts equal to the taxes and assessments which would have been received from year to year by each such jurisdiction if such acquisition had not occurred, [~~except for such taxing jurisdictions which tax the Shoreham plant,in which case the in lieu of tax payments shall in the first year after the acquisition be equal to one hundred percent of the taxes and assessments which would have been received by such taxing jurisdictions. In each succeeding year such in lieu of tax payments shall be decreased by ten percent until such time as such payments equal taxes and assessments which would have been levied on such plant in a nonoperative state~~] provided, however, that for the calendar year starting on January first, two thousand fifteen, and for each calendar year thereafter, such payments in lieu of taxes shall not exceed the in lieu of tax payments made to such municipalities and school districts in the immediately preceding year by more than two percent.

2. The authority shall also make payments in lieu of taxes for those taxes which would otherwise be imposed [~~upon LILCO, if LILCO were to continue in operation,~~] pursuant to sections one hundred eighty-six-a and one hundred eighty-six-c of the tax law, and to former [~~sections one hundred eighty-six and~~] section one hundred eighty-six-b of the tax law as such [~~sections one hundred eighty-six and one hundred eighty-six-b were~~] section was in effect on December thirty-first, nineteen hundred ninety-nine, [~~paragraph (b) of subdivision four of section one hundred seventy-four of the navigation law,~~] and any taxes imposed by a city pursuant to the authorization granted by section twenty-b of the general city law.

3. No municipality or governmental subdivision, including a school district or special district, shall be liable to the authority or any other entity for a refund of property taxes originally assessed against the Shoreham plant. Any judicial determination that the Shoreham plant assessment was excessive, unequal or unlawful for any of the years from nineteen hundred seventy-six to the effective date of this title shall not result in a refund by any taxing jurisdiction of taxes previously paid by LILCO pursuant to such Shoreham plant assessment. The authority shall discontinue and abandon all proceedings, brought by its predecessor

in interest, which seek the repayment of all or part of the taxes assessed against the Shoreham plant.

§ 9. Subdivision 1 of section 1020-s of the public authorities law, as amended by chapter 388 of the laws of 2011, is amended to read as follows:

1. The rates, services and practices relating to the electricity generated by facilities owned or operated by the authority shall not be subject to the provisions of the public service law or to regulation by, or the jurisdiction of, the public service commission, except to the extent (a) article seven of the public service law applies to the siting and operation of a major utility transmission facility as defined there-in, (b) article ten of such law applies to the siting of a generating facility as defined therein, [~~and~~] (c) section eighteen-a of such law provides for assessment for certain costs, property or operations**, and (d) to the extent that the department of public service reviews and makes recommendations with respect to the operations and provision of services of, and rates and budgets established by, the authority pursuant to section three-b of such law**.

§ 10. Section 1020-w of the public authorities law, as added by chapter 517 of the laws of 1986, is amended to read as follows:

§ 1020-w. Audit and annual reports. The accounts of the authority shall be subject to the supervision of the state comptroller and an annual audit shall be performed by an independent certified accountant selected by the [~~state division of the budget~~] **authority, upon recommendation of its finance and audit committee**. The authority shall submit annually to the governor, the state comptroller, the temporary president of the senate, the speaker of the assembly and the county executives and governing bodies of the counties of Suffolk and Nassau, a detailed report pursuant to the provisions of section two thousand eight hundred of [~~title one of article nine of~~] this chapter, which report shall be verified by the chairman of the authority. The authority shall comply with the provisions of sections two thousand eight hundred one, two thousand eight hundred two and two thousand eight hundred three of [~~title one of article nine of~~] this chapter.

§ 11. Section 1020-cc of the public authorities law, as amended by chapter 413 of the laws of 2011, is amended to read as follows:

§ 1020-cc. Authority subject to certain provisions contained in the state finance law, the public service law, the social services law and the general municipal law.

1. All contracts of the authority shall be subject to the provisions of the state finance law relating to contracts made by the state. The authority shall also establish rules and regulations with respect to providing to its residential gas, electric and steam utility customers those rights and protections provided in article two and sections one hundred seventeen and one hundred eighteen of the public service law and section one hundred thirty-one-s of the social services law. The authority shall conform to any safety standards regarding manual lockable disconnect switches for solar electric generating equipment established by the public service commission pursuant to subparagraph (ii) of paragraph (a) of subdivision five and subparagraph (ii) of paragraph (a) of subdivision five-a of section sixty-six-j of the public service law. The authority shall let contracts for construction or purchase of supplies, materials, or equipment pursuant to section one hundred three and paragraph (e) of subdivision four of section one hundred twenty-w of the general municipal law.

2. The authority and service provider shall provide to the state comptroller on March thirty-first and September thirtieth of each year a

report documenting each contract in excess of two hundred fifty thousand dollars per year entered into with a third party and related to management

and operation services associated with the authority's electric transmission and distribution system, including the name of the third party, the contract term and a description of services or goods to be procured, and post such report on each of their websites. All contracts entered into between the service provider and third parties are not subject to the requirements of subdivision one of this section.

§ 12. Paragraph (b) of subdivision 4 of section 94-a of the executive law, as amended by chapter 8 of the laws of 2012, is amended to read as follows:

(b) The utility intervention unit shall have the power and duty to:

(i) on behalf of the secretary, initiate, intervene in, or participate in any proceedings before the public service commission **or the department of public service**, to the extent authorized by sections **three-b,** twenty-four-a, seventy-one, eighty-four or ninety-six of the public service law or any other applicable provision of law, where he or she deems such initiation, intervention or participation to be necessary or appropriate;

(ii) represent the interests of consumers of the state before federal, state and local administrative and regulatory agencies engaged in the regulation of energy services; [~~and~~]

(iii) accept and investigate complaints of any kind from Long Island power authority consumers, attempt to mediate such complaints where appropriate directly with such authority and refer complaints to the appropriate state or local agency authorized by law to take action with respect to such complaints[~~.~~]**; and**

(iv) hold regular forums in each of the service territories of the combination gas and electric corporations, as defined under section two of the public service law, and the Long Island power authority to educate consumers about utility-related matters and the regulatory process, opportunities to lower energy costs, including through energy efficiency and distributed generation, and other matters affecting consumers.

§ 13. Notwithstanding section 112 of the state finance law and notwithstanding any other provision of law to the contrary, including but not limited to any provision of law related to rebidding, letting or amending contracts of any amount, the Long Island Lighting Company dba LIPA is authorized to amend the operations services agreement, dated December 28, 2011, entered into with PSEG Long Island LLC, including Amendment Nos. 1 and 2 thereto, approved on June 27, 2012, solely by the following: (1) upon review and written recommendations made by the department of public service to the board of trustees of the Long Island power authority ("authority"), setting forth the reasons for and findings underlying such recommendations; and (2) adoption of a resolution by a majority of the authority's board of trustees.

§ 14. This act shall supersede the fifth project condition established in Resolution No. 97-LI-1 of the public authorities control board, dated July 16, 1997, related to the implementation of certain rate increases.

§ 15. Subdivision l of section 7208 of the education law, as amended by chapter 994 of the laws of 1971, is amended to read as follows:

l. The practice of engineering or land surveying, or using the title "engineer" or "surveyor" **(i)** exclusively as an officer or employee of a public service corporation by rendering to such corporation such services in connection with its lines and property which are subject to supervision with respect to the safety and security thereof by the

public service commission of this state, the interstate commerce commission or other federal regulatory body and so long as such person is thus actually and exclusively employed and no longer**, or (ii) exclusively as an officer or**

employee of the Long Island power authority or its service provider, as defined under section three-b of the public service law, by rendering to such authority or provider such services in connection with its lines and property which are located in such authority's service area and so long as such person is thus actually and exclusively employed and no longer;

§ 16. Repowering. If after the Long Island power authority, or its successor, determines, in accordance with the terms and conditions contained in the amended and restated power supply agreement ("A&R PSA"), dated October 10, 2012, between the authority and the owner of the legacy LILCO power generating facilities, that repowering any such generating facility is in the best interests of its ratepayers and will enhance the authority's ability to provide a more efficient, reliable and economical supply of electric energy in its service territory, consistent with the goal of improving environmental quality, the authority will exercise its rights under the A&R PSA related to repowering such facility, and shall enter into an agreement related to payments in lieu-of-taxes for a term commensurate with any power purchase agreement entered into related to such repowered facility, consistent with other such agreements related to generating facilities under contract to the authority in the service territory.

§ 17. This act shall take effect January 1, 2014; provided, however, that section twelve of this act shall take effect April 1, 2014, sections five, ten, eleven, thirteen, fourteen, fifteen and sixteen of this act shall take effect immediately; provided further that section thirteen of this act shall expire and be deemed repealed January 1, 2015; and provided further that the amendments to subdivision 6 of section 18-a of the public service law made by section two of this act shall not affect the repeal of such subdivision and shall be deemed repealed therewith.

PART B

Section 1. Legislative findings. The legislature hereby finds and determines:

1. On May 28, 1998, Long Island Power Authority (the authority) acquired all the capital stock and associated assets, including transmission and distribution (T&D) system assets of Long Island Lighting Company (LILCO) which does business as the retail electric utility on Long Island, New York under the name of LIPA. In connection with that acquisition, the authority took over ultimate responsibility for providing electric utility service to residential, commercial, industrial, nonprofit and governmental customers in the counties of Suffolk and Nassau and a portion of the county of Queens (hereinafter referred to as the "service area"). Such acquisition effectively converted LILCO from an investor-owned utility that was comprehensively regulated by the New York Public Service Commission (PSC) and the United States Federal Energy Regulatory Commission (FERC), to a municipal utility that is not comprehensively regulated either by the PSC or FERC.

2. Since May 28, 1998, neither the authority nor LIPA has directly operated or maintained the T&D system assets, provided electric service or billed and collected T&D rates from LIPA's customers; instead, the authority and LIPA have contracted out virtually all of these activities

to other companies. Most of these operations and service responsibilities have been contracted out to affiliates of a company now known as National Grid plc (National Grid), a multi-national electric and gas utility company organized under the laws of England and Wales pursuant to a management services agreement. Thus, while the LIPA name appears on customer bills as well as on service trucks and other equipment used in the service area,

affiliates of National Grid have been principally in charge of management and operation of the T&D system assets and providing electricity to consumers in the service area. The authority and LIPA have now contracted with affiliates of Public Service Enterprise Group and Lockheed Martin Services Inc. (PSEG-Lockheed) to provide operation and maintenance services for the T&D system assets for ten years starting January 1, 2014, when the National Grid contract expires.

3. High costs of electric utility service poses a serious threat to the economic well-being, health and safety of the residents of and the commerce and industry in the service area. High costs of electric utility service deter commerce and industry from locating in the service area and have caused existing commerce and industry to consider seriously moving out of the service area.

4. High debt and associated debt service contribute to the authority's high electric rates. The authority has approximately seven billion dollars in outstanding debt, a substantial portion of which was issued to refinance debt associated with construction of the now abandoned Shoreham nuclear power plant. The annual debt service associated with such bonds puts pressure on the authority's customer rates.

5. As of December 31, 2012, the three major rating agencies generally rated the authority's debt in the single-A range, though Moody's Investors Services assigns approximately seven hundred million dollars of the authority's debt slightly lower ratings of Baa1 and Baa2.

6. If securitized restructuring bonds were issued by a bankruptcy-remote entity with a AAA or equivalent rating in current market conditions to finance a portion of the costs of purchasing, redeeming or defeasing outstanding debt of the authority, and other associated costs, the debt service on the authority's debt could be reduced and the costs of electric utility service could be lowered.

7. Securitized restructuring bonds are likely to be most attractive to the investing public and result in the lowest possible yields if they are issued by a newly organized, special purpose public benefit corporation or other corporate municipal instrumentality of the state.

8. The purpose of this act is to provide a legislative foundation for the issuance of securitized restructuring bonds to refinance outstanding debt of the authority, a significant portion of which relates to LILCO's costs of constructing and financing the now abandoned Shoreham nuclear power plant, including the creation of restructuring property by the authority to provide for the redemption or defeasance of a portion of the outstanding debt of the authority. It is the intent of the legislature to authorize, for the purpose of reducing electric utility costs to consumers in the service area, the following: (a) the organization of a restructuring bond issuer as a special purpose corporate municipal instrumentality of the state, created for the limited purpose of issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt of the authority and associated costs, which securitized restructuring bonds create no new financial obligations or liabilities for the authority or for the state; and (b) implementation of contracts with owners of the securitized restructuring bonds through a

statutory pledge and agreement that the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds until those bonds are no longer outstanding and all

amounts due and owing under the related transaction documents have been paid in full.

9. Accordingly, the issuance of securitized restructuring bonds is expected to result in lower aggregate distribution and transmission charges and transition charges, compared to other available alternatives.

§ 2. Definitions. As used or referred to in this act, unless a differing meaning clearly appears from the context:

1. "Ancillary agreement" means any bond insurance policy, letter of credit, reserve account, surety bond, swap arrangement, hedging arrangement, liquidity or credit support arrangement or other similar agreement or arrangement entered into in connection with the issuance of restructuring bonds that is designed to promote the credit quality and marketability of such restructuring bonds or to mitigate the risk of an increase in interest rates.

2. "Approved restructuring costs" means, to the extent approved as such under a restructuring cost financing order,

(a) costs of purchasing, redeeming or defeasing a portion of outstanding debt of the authority, including bonds and notes issued by the authority, debt issued by the New York state energy research and development authority for the benefit of the LILCO;

(b) costs of terminating interest rate swap contracts and other financial contracts entered into by or for the benefit of the authority and related to debt obligations of the authority;

(c) rebate, yield reduction payments and any other amounts payable to the United States Treasury or to the Internal Revenue Service to preserve or protect the federal tax-exempt status of outstanding debt obligations of the authority; and (d) upfront financing costs associated with restructuring bonds.

3. "Assignee" means any individual, corporation, limited liability company, partnership or limited partnership, trust or other legally-recognized entity to which an interest in restructuring property is assigned, sold or transferred, other than as security, including any assignee of that party.

4. "Authority" means Long Island Power Authority, a corporate municipal instrumentality and political subdivision of the state.

5. "Consumer" means any individual, governmental body, trust, business entity, nonprofit organization or other legally-recognized entity that takes electric delivery service within the service area by means of electric transmission or distribution facilities, whether those electric transmission or distribution facilities are owned by LIPA or any other entity.

6. "Financing cost" means the costs to issue, service, or repay restructuring bonds, whether incurred upon issuance of such restructuring bonds or over the life of the restructuring bonds, and approved for recovery in a restructuring cost financing order. Without limitation, "financing cost" may include, as applicable, any of the following:

(a) principal, interest and redemption premiums payable on restructuring bonds;

(b) any payment required under an ancillary agreement and any amount required to fund or replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds;

(c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and

(d) any cost related to issuing restructuring bonds, administering the restructuring bond issuer and servicing restructuring property and

restructuring bonds, or related to the efforts to prepare or obtain approval of a restructuring cost financing order, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, trustee fees and expenses, legal fees and expenses, accounting fees and expenses, administrative fees and expenses, placement fees, underwriting fees, fees and expenses of the authority's advisors and outside counsel, if any, rating agency fees and any other related cost that is approved for recovery in the restructuring cost financing order.

7. "Financing entity" means the restructuring bond issuer, the authority or any servicer, trustee, collateral agent, and other person or entity acting for the benefit of owners of the restructuring bonds, the restructuring bond issuer or the authority that may own restructuring property or have rights to receive proceeds of restructuring bonds or to receive proceeds from the sale of restructuring property.

8. "LIPA" means Long Island Lighting Company, currently doing business under the name of LIPA.

9. "Ongoing financing costs" means financing costs that are not upfront financing costs. Ongoing financing costs include: (a) principal, interest and redemption premiums payable on restructuring bonds; (b) any payment required under an ancillary agreement and any amount required to replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to restructuring bonds; (c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and (d) any cost related to administering the restructuring bond issuer and servicing restructuring property or restructuring bonds, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, administrative fees and expenses, trustee fees and expenses, and legal fees and expenses, accounting fees and expenses, and rating agency fees, approved for recovery in the restructuring cost financing order. Ongoing financing costs shall include any excess of actual upfront financing costs over the estimate of upfront financing costs included in the principal amount of the restructuring bonds.

10. "Restructuring bond issuer" means the corporate municipal instrumentality of the state created under section four of this act.

11. "Restructuring bonds" means bonds or other evidences of indebtedness that are issued pursuant to an indenture or other agreement of the restructuring bond issuer under a restructuring cost financing order (a) the proceeds of which are used, directly or indirectly, to recover, finance, or refinance approved restructuring costs, (b) that are directly or indirectly secured by, or payable from, restructuring property, and (c) that have a term no longer than thirty years.

12. "Restructuring cost financing order" means an order by the authority, adopted in accordance with this act, which approves the imposition and collection of transition charges, and the financing of approved restructuring costs and upfront financing costs through the sale of restructuring property and the issuance of restructuring bonds, and which includes a procedure to require periodic adjustments to transition charges to ensure the collection of transition charges sufficient to

provide for the timely payment of scheduled debt service on the restructuring bonds and all other ongoing financing costs contemplated by the restructuring cost financing order.

13. "Restructuring property" means the property rights and interests created pursuant to this act, including, without limitation, the right, title, and interest: (a) in and to the transition charges established

pursuant to a restructuring cost financing order, as adjusted from time to time in accordance with the restructuring cost financing order; (b) in and to all revenues, collections, claims, payments, money, or proceeds of or arising from the transition charges or constituting transition charges that are the subject of a restructuring cost financing order, regardless of whether such revenues, collections, claims, payments, money, or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, claims, payments, money or proceeds; and (c) in and to all rights to obtain adjustments to the transition charges pursuant to the terms of the restructuring cost financing order. Restructuring property shall constitute a vested, presently existing property right notwithstanding the fact that the value of the property right will depend on further acts that have not yet occurred, including but not limited to, consumers remaining or becoming connected to the T&D system assets and taking electric delivery service, the imposition and billing of transition charges, or, in those instances where consumers are customers of LIPA or any successor owner of the T&D system assets, such owner performing certain services.

14. "Service area" means the geographical area within which LIPA provided electric distribution services as of the implementation date of this act.

15. "Servicer" means an entity authorized and required, by contract or otherwise, to impose, bill and collect transition charges, to prepare periodic reports regarding billings and collections of transition charges, to remit collections to the appropriate financing entity, and to provide other services contemplated by the restructuring cost financing order, which may include calculation of periodic adjustments to the transition charges or providing other services related to the restructuring property. Without limitation, LIPA or any successor owner of the T&D system assets, their agents or subcontractors, or any entity authorized to bill and collect T&D rates may be a servicer.

16. "Servicing fee" means, except to the extent otherwise specified in a restructuring cost financing order, the periodic amount paid pursuant to a servicing agreement, indenture or other such document to a servicer of restructuring property which amount shall approximate the estimated incremental cost of imposing, billing and collecting transition charges, preparing servicing reports and performing other customary servicing services required in connection with securitized bonds. A restructuring cost financing order may authorize a smaller fee payable to a successor servicer that is affiliated with a successor owner of the T&D system assets if the incremental cost of providing servicing services is less than LIPA's incremental costs. A restructuring cost financing order may authorize a larger fee payable to a successor servicer that is not affiliated with the owner of the T&D system assets or is not performing similar services with respect to the base rates of the owner of the T&D system assets if such larger fee is reasonably necessary to employ a reliable successor servicer.

17. "Successor regulator" means a regulatory department, commission or other instrumentality or subdivision of the state with jurisdiction to

regulate the T&D rates of LIPA or its successor as owner of the T&D system assets.

18. "Third-party biller" means any person or entity authorized, required or entitled to bill or collect transition charges or T&D rates other than the authority, LIPA or a successor owner of the T&D system assets, or a servicer.

19. "T&D rates" means rates and charges for electric transmission and distribution services in the service area. "T&D rates" shall not include charges for the generation or resale of electricity or any charges imposed to fund public purpose programs.

20. "T&D system assets" means the physically integrated system of electric transmission and distribution facilities (and other general property and equipment used in connection therewith) owned by LIPA as of the effective date of this act or thereafter acquired for use by LIPA or its successors in providing retail electric utility service to consumers in the service area.

21. "Transition charges" means those rates and charges relating to the T&D system assets that are separate and apart from base rates of LIPA or any successor owner of the T&D system assets and that are authorized in a restructuring cost financing order to recover from consumers the principal, interest and premium payable on restructuring bonds and the other ongoing financing costs associated with the restructuring bonds. As provided in paragraph (c) of subdivision 5 of section five of this act, transition charges shall be imposed on all consumers in the service area and collected by LIPA or any successor owner of the T&D system assets, their agents, subcontractors, assignees, collection agents or any other entity designated under the restructuring cost financing order.

22. "Upfront financing costs" means the fees and expenses to issue restructuring bonds, including, without limitation, expenses associated with the efforts to prepare or obtain approval of a restructuring cost financing order, as well as the fees and expenses associated with the structuring, marketing, and issuance of restructuring bonds, including, without limitation, counsel fees, structural advisory fees, underwriting fees and original issue discount, rating agency and trustee fees (including fees of trustee's counsel), accounting and auditing fees, printing and marketing expenses, stock exchange listing fees and compliance fees, filing fees, any applicable taxes, payments in lieu of taxes, the amount required to fund a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds, and fees and expenses of the authority's advisors and outside counsel, if any. Upfront financing costs include reimbursement to any person of amounts advanced for payment of such costs. Upfront financing costs do not include scheduled debt service or other ongoing financing costs, to the extent such ongoing financing costs are payable from transition charge revenues. If any upfront financing costs cannot be reasonably determined before the principal amount of restructuring bonds is fixed, such financing costs shall be estimated and the aggregate of such estimates shall be included as an upfront financing cost for purposes of determining the principal amount of restructuring bonds to be issued. If the actual upfront financing costs are greater than the estimated upfront financing costs, the difference shall be deemed to be an ongoing financing cost; if the actual upfront financing costs are less than the estimated upfront financing costs, the proceeds corresponding to such difference shall be used to pay ongoing financing costs.

§ 3. Procedure; judicial review. 1. Standard. The authority may prepare a restructuring cost financing order for the purpose of issuing restructuring bonds to refinance outstanding debt of the authority based on a finding that such bond issuance is expected to result in savings to consumers of electric transmission and distribution services in the service area on a net present value basis.

2. Public hearings. Notwithstanding any other provision of law to the

contrary, at any time after the effective date of this act, after making such finding, the authority shall schedule and hold one or more expedited public statement hearings on the proposed restructuring cost financing order. After the conclusion of such hearings and its review of any comments received, the authority shall finalize the restructuring cost financing order for submission to the board of trustees of the authority and to the public authorities control board ("PACB"). The PACB shall have the power and it shall be its duty to, upon receiving an application for approval of a restructuring cost financing order, within thirty days after receipt of such order, either approve, absent any conditions of approval, or disapprove such order based solely on the assumptions and conditions set forth in the restructuring cost financing order and whether such order complies with the standards set forth in this act. If the public authorities control board fails to approve or disapprove such restructuring cost financing order within such thirty day period, the PACB shall be deemed to have approved the restructuring cost financing order. If the board of trustees of the authority approves such restructuring cost financing order and the PACB approves or is deemed to have approved such restructuring cost financing order, the restructuring cost financing order shall become a final rate order by the authority.

3. Appeals. Because delay in the final determination of the petition will delay the issuance of restructuring bonds, thereby diminishing savings to consumers that might be achieved if the restructuring bonds were issued promptly after the issuance of the restructuring cost financing order, notwithstanding any other law to the contrary, any action, suit or proceeding to which the authority or the restructuring bond issuer may be a party, in which any question arises as to the validity of this act or any restructuring cost financing order, shall be preferred over all other civil causes in all courts of the state, except election matters, and shall be heard and determined in preference to all other civil business pending therein, except election matters, irrespective of position on the calendar. Such preference shall also be granted upon application of counsel to the authority in any action or proceeding questioning the validity of this act or any restructuring cost financing order in which such counsel may be allowed to intervene. Notwithstanding any other provision of law to the contrary, the validity of this act may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days of the effective date of this act, and the validity of any restructuring cost financing order may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days after such restructuring cost financing order becomes a final rate order by the authority; provided, however, that any such action, suit or proceeding and all supporting papers shall be filed directly to the Supreme Court, Appellate Division, Second Judicial Department.

4. Expiration of appeals. The authority shall provide written notification to the restructuring bond issuer upon the authority's determination that any and all actions, suits and proceedings challenging this

act and the final restructuring cost financing order have been denied or dismissed or the timing associated with the filing of such actions, suits and proceedings has lapsed or expired, and any related appeals have been exhausted or the timing related to such appeals has lapsed or expired.

5. Agreement to sell restructuring bonds. Within the time specified in

the restructuring cost financing order, after receiving notice from the authority that the time for petitions and appeals has lapsed or expired, the restructuring bond issuer shall enter into an agreement with one or more underwriters or purchasers satisfactory to the authority to sell the restructuring bonds in compliance with the restructuring cost financing order. No later than the third business day after the pricing of the restructuring bonds in accordance with such agreement, the initial servicer shall determine the initial transition charges and the expected savings to consumers in accordance with the restructuring cost financing order and shall file an issuance advice letter with the authority and the restructuring bond issuer setting forth the principal amount of restructuring bonds to be issued, the pricing, the net proceeds, the initial transition charges, the expected savings to consumers and any other information required by the restructuring cost financing order. No later than the end of the third business day after the filing of such issuance advice letter, the authority shall confirm in a notice to the restructuring bond issuer that such pricing complies with the restructuring cost financing order.

6. Issuance of restructuring bonds. Within ninety days after receiving notice of confirmation from the authority, the restructuring bond issuer shall issue the restructuring bonds, in one or more series or tranches and at one or more times, pursuant to the agreement to sell the restructuring bonds. The restructuring bond issuer shall purchase the restructuring property from the authority for a purchase price equal to the net proceeds from the sale of the restructuring bonds less any amounts of such proceeds required to fund or pay upfront financing costs.

7. Irrevocability. Upon the issuance of the restructuring bonds, the transition charges, including any adjustments thereof as provided in the restructuring cost financing order, shall be deemed established by the authority as irrevocable, final and effective without further action by the authority, or any other entity. The state, including the authority or any successor regulator, thereafter may not in any way take or permit any action to reduce, impair, postpone or terminate the transition charges approved in the restructuring cost financing order, as the same may be adjusted from time to time pursuant to subdivision 3 of section five of this act, or impair the restructuring property or the collection or recovery of transition charge revenues, including, but not limited to, either directly or indirectly by taking transition charges into account when setting other rates for any owner of the T&D system assets; nor shall the amount of revenues arising with respect to restructuring property be subject in any way to reduction, impairment, postponement, or termination.

8. Application of proceeds. The restructuring bond issuer shall cause the proceeds from its issuance of the restructuring bonds to be placed in one or more separate accounts and used only to pay or fund upfront financing costs and to purchase the restructuring property from the authority. The authority shall cause the proceeds from its sale of restructuring property to be placed in one or more separate accounts and used only to pay approved restructuring costs, and if funds remain in those accounts after the payment of all approved restructuring costs, to

make a refund or credit to consumers on the same basis that transition charges are then being imposed, to the extent such a refund or credit is practical.

§ 4. Creation of restructuring bond issuer. 1. Creation of restructuring bond issuer. For the purpose of effectuating the purposes

declared in section one of this act, there is hereby created a special purpose corporate municipal instrumentality of the state to be known as "utility debt securitization authority", which shall be a body corporate and politic, a political subdivision of the state, and a public benefit corporation, exercising essential governmental and public powers for the good of the public. The restructuring bond issuer shall not be created or organized, and its operations shall not be conducted, for the purpose of making a profit. No part of the revenues or assets of the restructuring bond issuer shall inure to the benefit of or be distributable to its trustees or officers or any other private persons, except as herein provided for actual services rendered.

2. Activities limited to issuing restructuring bonds and related activities.

(a) The restructuring bond issuer is hereby authorized to:

(i) issue the restructuring bonds contemplated by a restructuring cost financing order, and use the proceeds thereof to purchase or acquire, and to own, hold and use restructuring property or to pay or fund upfront financing costs provided, however, that the restructuring bond issuer shall only issue and sell restructuring bonds once;

(ii) contract for servicing of restructuring property and restructuring bonds and for administrative services; and

(iii) pledge the restructuring property to secure the restructuring bonds and the payment of ongoing financing costs, all pursuant to section seven of this act.

(b) So long as any restructuring bonds remain outstanding, the restructuring bond issuer shall not be authorized to merge or consolidate, directly or indirectly, with any person or entity. Additionally, the restructuring bond issuer shall not have the power or authority to incur, guarantee or otherwise become obligated to pay any debt or other obligations other than the restructuring bonds and financing costs unless otherwise permitted by the restructuring cost financing order. The restructuring bond issuer shall keep its assets and liabilities separate and distinct from those of any other entity.

(c) The restructuring bond issuer shall have no additional authority to engage in other business activities; provided, however, that in connection with the powers specified in paragraph (a) of subdivision 2 of this section, as a financing entity, the restructuring bond issuer shall have the power to:

(i) sue and be sued;

(ii) have a seal and alter the same at pleasure;

(iii) make and alter by-laws for its organization and internal management and make rules and regulations governing the use of its property;

(iv) make and execute contracts and all other instruments necessary or convenient for the exercise of its powers and functions under this act and to commence any action to protect or enforce any right conferred upon it by any law, contract or other agreement, including, without limitation, make and execute contracts with the authority, LIPA or any successor owner of the T&D system assets, any servicers, any financing entity or any other public or private entities to service restructuring property owned by restructuring bond issuer, to service restructuring bonds issued by restructuring bond issuer, and to provide services in

administering the restructuring bond issuer, and to pay compensation for such services;

(v) appoint officers, agents and employees, prescribe their duties and qualifications, fix their compensation and engage the services of

private consultants, accountants, counsel and others on a contract basis for rendering professional and technical assistance and advice;

(vi) pay its operating expenses, scheduled debt service on the restructuring bonds and other ongoing financing costs;

(vii) issue restructuring bonds and provide for the rights of the holders thereof;

(viii) procure insurance against any loss in connection with its activities, properties and assets in such amount and from such insurers as it deems desirable;

(ix) invest any funds or other moneys under its custody and control in investment securities or under any ancillary agreement;

(x) establish and maintain such reserves, special funds and accounts, to be held in trust or otherwise, as may be required by agreements made in connection with the restructuring bonds, or any agreement between itself and third parties;

(xi) as security for the payment of the principal of and interest on any restructuring bonds issued by it pursuant to this act, and any agreement made in connection therewith, pledge all or any part of its revenues or assets, including, without limitation, restructuring property, unspent proceeds of its restructuring bonds, transition charge revenues, and earnings from the investment and reinvestment of unspent proceeds of its restructuring bonds and transition charge revenues; and

(xii) do any and all things necessary or convenient to carry out its purposes and exercise the powers expressly given and granted in this section.

3. No authority to file for bankruptcy protection. The restructuring bond issuer shall not be authorized to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. No governmental officer or organization is empowered to authorize, whether by executive order or otherwise, restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. Until at least one year and one day after all restructuring bonds issued by restructuring bond issuer have ceased to be outstanding and all unpaid financing costs have been paid, the state hereby pledges, contracts and agrees with owners of restructuring bonds issued by restructuring bond issuer that the state will not limit or alter the denial of authority to the restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code.

4. Governance. The restructuring bond issuer shall be governed by a board consisting of three trustees appointed by the governor. The trustees shall not be trustees, directors, officers, or employees of the authority, LIPA or any successor owner of the T&D system assets.

(a) One of the trustees first appointed shall serve for a term ending four years from January first next succeeding his appointment; one of such trustees shall serve for a term ending five years from such date; and one of such trustees shall serve for a term ending six years from such date. Their successors shall serve for terms of six years each. Trustees shall continue in office until their successors have been appointed and qualified and the provisions of section 39 of the public officers law shall apply. In the event of a vacancy occurring in the

office of a trustee by death, removal, resignation or otherwise, the Governor shall appoint a successor to serve for the balance of the unexpired term.

(b) Trustees shall serve without salary or other compensation, but each trustee shall be entitled to reimbursement for actual and necessary expenses incurred in the performance of his or her official duties.

(c) A majority of the trustees shall constitute a quorum for the transaction of any business or the exercise of any power or function of restructuring bond issuer. Any one or more trustees may participate in a meeting of the board by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation by such means shall constitute presence in person at a meeting. The board may delegate to one or more of its trustees, or officers, agents and employees, such powers and duties as the board may deem proper.

(d) Such trustees may engage in private employment, or in a profession or business. Restructuring bond issuer, its trustees, officers and employees shall be subject to the provisions of sections 73 and 74 of the public officers law.

(e) Notwithstanding any inconsistent provision of law to the contrary, general, special or local, no officer of the state or of any civil division thereof shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of an appointment as trustee of restructuring bond issuer.

(f) The governor may remove any trustee for inefficiency, neglect of duty or misconduct in office after giving him or her a copy of the charges against him or her and an opportunity to be heard, in person or by counsel, in his or her defense, upon not less than ten days notice. If any trustee shall be so removed, the governor shall file in the office of the department of state a complete statement of the charges made against such trustee and his or her findings thereon, together with a complete record of the proceedings.

(g) Each trustee shall have a fiduciary duty to act in the best interests of the restructuring bond issuer, including its creditors, the owners of the restructuring bonds, and such other duties as may be specified in the organizational documents or other agreements of the restructuring bond issuer.

(h) The restructuring bond issuer and its corporate existence shall continue until one year and one day after all restructuring bonds and ongoing financing costs and other indebtedness of restructuring bond issuer have been actually paid and all its other liabilities and obligations have been paid, met or otherwise discharged. Upon termination of the existence of restructuring bond issuer, all of its rights and property shall pass to and be vested in the state.

§ 5. Restructuring cost financing orders. 1. Content of restructuring cost financing orders. The restructuring cost financing order shall include the following: (i) a description of the approved restructuring costs; (ii) the amount of approved restructuring costs that the authority proposes to pay through the sale of the restructuring property and the issuance of the restructuring bonds; (iii) designation of the authority as the entity in which initial ownership of restructuring property will vest; (iv) an estimate of the date on which restructuring bonds will be issued and the expected scheduled term to maturity of the restructuring bonds; (v) a description of the estimated debt service on the restructuring bonds and other ongoing financing costs that may be recovered through transition charges; as part of this description, the

restructuring cost financing order may include qualitative or quantitative limitations on financing costs approved to be recovered provided

that no such limitation on financing costs shall impair the ability of the restructuring bond issuer to pay and service the restructuring bonds in accordance with their terms; (vi) a proposed methodology for allocating transition charges on an equal percentage basis among customer service classifications and among volumetric (kWh) and demand (kW) charges within those customer service classifications, along with an associated bill impact analysis of the proposed methodology; (vii) a description of the proposed adjustment mechanism to reconcile actual collections with forecasted collection on at least an annual basis and a finding that the adjustment mechanism is just and reasonable; (viii) a description of the benefits to consumers in the service area that are expected to result from the sale of the restructuring property and the issuance of restructuring bonds as opposed to traditional alternative financing mechanisms; (ix) specifying the entity that will contract to act as servicer with respect to the restructuring property and the restructuring bonds on terms and conditions mutually acceptable to such servicer and the restructuring bond issuer; (x) specifying the entity or entities that will contract to provide administrative or other services to the restructuring bond issuer; (xi) specifying when the restructuring property will be created and vest and addressing such other matters as may be necessary or desirable for the marketing or servicing of the restructuring bonds or the servicing of the restructuring property; (xii) authorizing the imposition, billing and collection of transition charges to pay debt service on the restructuring bonds and other ongoing financing costs; (xiii) a description of the restructuring property that will be created and that may be used to pay and secure the payment of the restructuring bonds approved to be issued in the restructuring cost financing order; (xiv) a requirement that the amounts in the debt service reserve accounts or other accounts funded with the proceeds of restructuring bonds or transition charges be fully used, to the extent practical, to make the final payments of principal and interest on the restructuring bonds and other ongoing financing costs or to make refunds to consumers on the same basis as such consumers would have then been obligated to pay transition costs; and (xv) the finding required by subdivision 1 of section 3 of this act.

2. Periodic reports. A restructuring cost financing order shall require the restructuring bond issuer or the servicer to file at least annually with the authority and the appropriate financing entity a periodic report showing the billing and collection of transition charges, the application of transition charge revenues to debt service on the restructuring bonds and other ongoing financing costs, and the balances in any debt service reserve accounts or other accounts required by the restructuring cost financing order.

3. Adjustment mechanism.

(a) Each restructuring cost financing order shall include a mathematical formula for making periodic adjustments to the transition charges. The mathematical formula shall apply the following principles:

(i) The transition charges will be adjusted at least annually to ensure that the collections of transition charges are adequate to pay principal and interest on the associated restructuring bonds when due pursuant to the expected amortization schedule, to fund all debt service reserve accounts to the required levels and to pay when due all other expected ongoing financing costs.

(ii) The adjustments of transition charges will take into account historical and reasonably foreseeable differences between amounts billed

and amounts collected due to applicable taxes, consumer defaults and delays, billing lags, write-offs and other factors.

(iii) The adjustments of transition charges will take into account historical and reasonably foreseeable variations in billings due to variations in electricity consumption associated with the seasons, storms and other weather conditions, outages, gain or loss of consumers, efficiencies, electric vehicles, economic conditions or other factors.

(iv) The adjustments of transition charges will take into account any over-collection or under-collection of transition charges so that, to the extent practical, the outstanding balance of restructuring bonds is equal to the scheduled balance on the expected amortization schedule, the amounts in the debt service reserve accounts are equal to the required reserve level, and all ongoing financing costs are paid when due.

(v) The adjustments of transition charges will be applied ratably to the transition charges for each customer service classification.

(b) Once restructuring bonds have been issued, the adjustment mechanism specified in the restructuring cost financing order shall be applied to correct for any over-collection or under-collection of transition charges and to provide for timely payment of scheduled principal of and interest on the restructuring bonds and the payment and recovery of other ongoing financing costs in accordance with the restructuring cost financing order. Application of the adjustment mechanism shall occur at least annually or more frequently as provided in the restructuring cost financing order. A notice of such periodic adjustment of transition charges shall be filed with the authority by or on behalf of the owner of restructuring property and a copy shall be provided to the owner of the T&D system assets at least sixty days before the adjustment is to take effect, provided that the restructuring bond issuer may request an earlier effective date.

(c) Each adjustment to the transition charge, in amounts as calculated by or on behalf of the owner of restructuring property, shall automatically become effective sixty days following the date on which the notice of periodic adjustment is filed with the authority unless the authority approves an earlier effective date requested by the restructuring bond issuer.

(d) Notwithstanding any other provision of law to the contrary, the authority shall allow interested parties thirty days from the date of filing of the notice for adjustment within which to make comments. Such comments shall be limited to the mathematical accuracy of the calculations of the amount of the adjustments. If the authority determines that the calculation of the transition charge adjustment in the notice was mathematically inaccurate, the transition charge adjustment shall be changed as soon as it is reasonably practical to do so, but estimated overcollections or undercollections resulting from the mathematical error shall be taken into account in the next succeeding periodic adjustment.

(e) No adjustment pursuant to this section shall in any way affect the irrevocability of the restructuring cost financing order as specified in subdivision 4 of section five of this act. No adjustment pursuant to this section shall require any approvals or action under any other law or shall be deemed to be the establishment of a new charge, fee or rate under any law.

4. Irrevocability of restructuring cost financing orders.

(a) A restructuring cost financing order shall be an irrevocable final

rate order when the time for any actions, suits, proceedings and appeals challenging such final restructuring cost financing order has lapsed or expired as provided in subdivision 3 of section three of this act.

(b) A restructuring cost financing order may be amended on or after the date of issuance of restructuring bonds approved thereunder only: (i) at the request of the authority; (ii) in accordance with any restrictions and limitations on amendment set forth in the restructuring cost financing order; (iii) subject to the limitations set forth in subdivision 7 of section three of this act; and (iv) upon approval by the PACB within thirty days of receipt of such amendment; provided, however, that if no approval or disapproval is made within such time, the amendment shall be deemed approved.

(c) This act, and any restructuring cost financing order made pursuant to this act, shall not be interpreted to alter or limit the rights vested in the authority to establish sufficient T&D rates to pay and perform all of its obligations and contracts with the authority's bondholders and others when due.

5. Effect of restructuring cost financing order.

(a) A restructuring cost financing order shall remain in effect and unabated until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all ongoing financing and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) A restructuring cost financing order shall remain in effect and unabated notwithstanding the bankruptcy, reorganization or insolvency of the authority, the restructuring bond issuer, LIPA or any successor owner of the T&D system assets, or any affiliate of the aforementioned, or the commencement of any judicial or nonjudicial proceeding therefor.

(c) For so long as restructuring bonds issued pursuant to a restructuring cost financing order are outstanding, and the related approved restructuring costs have not been paid in full, the transition charges authorized in the restructuring cost financing order shall be non-bypassable and shall apply to all consumers connected to the T&D system assets and taking electric delivery service located within the service area, whether or not the consumers produce their own electricity or purchase electric generation services from a provider of electric generation services other than the owner of the T&D system assets and whether or not the T&D system assets continue to be owned by LIPA.

§ 6. Restructuring bonds. 1. No recourse. Restructuring bonds shall be without recourse to the credit or any assets of the authority, LIPA and the restructuring bond issuer, other than the restructuring property and other assets and revenues of restructuring bond issuer as specified in the pertinent restructuring cost financing order.

2. Exemption from taxation.

(a) It is hereby found and declared that the activities of the restructuring bond issuer are primarily for the benefit of the people of the state of New York, for the improvement of their welfare and prosperity, and is a public purpose, and the restructuring bond issuer shall be regarded as performing an essential governmental function in carrying out the provisions of this act.

(b) The restructuring bond issuer shall not be required to pay taxes or assessments upon any of the property acquired or controlled by it or upon its activities in the use thereof or upon income derived therefrom.

(c) Restructuring bonds, their transfer and the income therefrom shall, at all times, be free from taxation by the state or any munici-

pality, except for estate and gift taxes.

3. Restructuring bonds not debt of the state. Restructuring bonds issued pursuant to a restructuring cost financing order and the provisions of this act shall not constitute a debt, general obligation or a pledge of the faith and credit or taxing power of the state or of any county, municipality or any other political subdivision, agency or instrumentality of the state. Holders of restructuring bonds shall not be taxed by the legislature or the taxing authority of any county, municipality or any other political subdivision, agency or instrumentality of this state for the payment of the principal thereof or interest thereon. The issuance of restructuring bonds does not obligate the state or any county, municipality or any other political subdivision, agency or instrumentality of the state to levy any tax or make any appropriation for payment of the principal of or interest on the restructuring bonds. All restructuring bonds must contain a statement to the following effect: "Neither the full faith and credit nor the taxing power of the state of New York is pledged to the payment of the principal of, or interest on, this bond."

4. Restructuring bonds as legal investments. Any restructuring bonds issued by the restructuring bond issuer are hereby made securities in which all public officers and bodies of this state and all municipalities, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings associations, including savings and loan associations, building and loan associations, investment companies and other persons carrying on a banking business, all trusts, estates and guardianships and all other persons whatsoever, who are now or may hereafter be authorized to invest in bonds or other obligations of this state, may properly and legally invest funds, including capital in their control or belonging to them. The restructuring bonds are also hereby made securities which may be deposited with and shall be received by all public officers and bodies of the state and all municipalities for any purpose for which the deposit of bonds or other obligations of the state is now or may hereafter be authorized.

§ 7. Restructuring property. 1. (a) Restructuring property that is created pursuant to a restructuring cost financing order shall constitute an existing, present property right, notwithstanding the fact that the imposition and collection of transition charges will depend on further acts that have not yet occurred, including but not limited to: (i) LIPA or any successor owner of the T&D system assets delivering electric energy or related services, (ii) a servicer performing servicing functions relating to the collection of transition charges, or (iii) the level of future consumption of electric energy. Restructuring property shall exist whether or not transition charges have been imposed, billed, accrued or collected and notwithstanding the fact that the value or amount of the restructuring property is dependent on the future provision of service to customers by LIPA or any successor owner of the T&D system assets.

(b) All restructuring property created pursuant to a restructuring cost financing order shall continue to exist until the restructuring bonds issued pursuant to such restructuring cost financing order are paid in full and all ongoing financing costs relating to the restructuring bonds have been paid in full.

(c) The restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of

restructuring property may be pledged to secure the payment of restructuring bonds, amounts payable to financing parties, amounts payable to holders of restructuring bonds, amounts payable under any ancillary agreement and other ongoing financing costs. So long as the restructuring property remains pledged to secure the restructuring bonds, revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs. After the occurrence of an event of default with respect to the restructuring bonds, all or any portion of restructuring property may be transferred, sold, conveyed or assigned to any person or entity. Any transfer, sale, conveyance, assignment, grant of a security interest in or pledge of restructuring property by the authority, the restructuring bond issuer, or other financing entity, to the extent previously approved in a restructuring cost financing order, does not require the prior consent and approval of any other person or entity under the public service law or any other law.

(d) If the owner of the T&D system assets, servicer, third-party biller, or any other person or entity authorized to collect transition charges, defaults on any required remittance of transition charge revenues, any court in the state, upon application by an interested party and without limiting any other remedies available to the applying party, shall order the sequestration and payment of the transition charge revenues for the benefit of the owners or pledgees of restructuring property. The order shall remain in full force and effect notwithstanding any bankruptcy, reorganization, or other insolvency proceedings with respect to a servicer, authority, LIPA or any successor owner of the T&D system assets or any affiliate thereof or of any other person or entity.

(e) Restructuring property, transition charges, transition charge revenues, and the interests of an assignee, bondholder, financing party or any other person in restructuring property or in transition charge revenues, are not subject to setoff, counterclaim, surcharge or defense by a servicer, any consumer, the authority, LIPA or any successor owner of the T&D system assets or any other person or in connection with any default, bankruptcy, reorganization or other insolvency proceeding of the authority, LIPA or any successor owner of the T&D system assets, any affiliate thereof or any other entity or otherwise. To the extent that any consumer makes a partial payment of a bill containing both transition charges and any other charges, such payment shall be allocated pro rata between the transition charges and the other charges unless the consumer specifies that a greater proportion of such payment is to be allocated to the transition charges, except that the other charges shall be reduced by the amount of any claims of setoff, counterclaim, surcharge or defense for purposes of such allocation.

(f) Any successor owner of the T&D system assets and any successor servicer shall be bound by the requirements of this act and shall perform and satisfy all obligations of a servicer in the same manner and to the same extent under a restructuring cost financing order as did LIPA and the initial servicer, including, without limitation, the obligation to impose, bill and collect the transition charges and to pay such collections to the person entitled to receive the transition charge revenues.

2. Security interests. Any pledge of restructuring property or proceeds thereof, including any moneys, revenues or property or of a revenue producing contract or contracts constituting part of the

restructuring property, made by the owner of restructuring property,

shall be perfected, valid and binding from the time when the pledge is made. The proceeds, moneys, revenues or proceeds so pledged and thereafter received by the owner of restructuring property shall immediately be subject to the lien of such pledge, and such lien shall be perfected, without any physical delivery thereof or further act. The lien of any such pledge shall be perfected, valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the owner of restructuring property irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens obtained by such claimants or transferees. The description of the restructuring property in a pledge or security agreement and any financing statement is sufficient if and only if the description refers to this Act and the restructuring cost financing order creating such restructuring property. No instrument by which a pledge or lien is created pursuant to this subdivision need be recorded in order to perfect such pledge or lien. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article 9 of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that the secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed. A pledge of restructuring property is a continuously perfected security interest and has priority over any other lien, created by operation of law or otherwise, that may subsequently attach to that restructuring property or proceeds thereof unless the holder of any such lien has agreed in writing otherwise. Any pledgee of restructuring property shall have a perfected security interest in the amount of all restructuring property revenues or other proceeds that are deposited in any deposit account or other account of the servicer or other entity in which restructuring property revenues or other proceeds have been commingled with other funds. Any other security interest that may apply to restructuring revenues or other proceeds shall be terminated when such revenues or proceeds are transferred to a segregated account for an assignee or a financing party. No application of the adjustment mechanism as described in this act shall affect the validity, perfection, or priority of a pledge of, security interest in or the sale or transfer of restructuring property.

3. Sales of restructuring property.

(a) A transfer of all or any portion of restructuring property, which the parties in the governing documentation have expressly stated to be a sale or other absolute transfer, in a transaction approved in a restructuring cost financing order, shall be treated as an absolute transfer of all of the transferor's right, title, and interest (as in a true sale), and not as a pledge or other financing, of the restructuring property, other than for federal, state and local income and franchise tax purposes.

(b) Any transfer of an interest in restructuring property shall be perfected, vested, valid and binding from the time when the transfer is made. Such transfer shall be perfected, vested, valid and binding as against the transferor, all parties having claims of any kind in tort, contract or otherwise against the transferor, and all other transferees of the transferor, irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens

obtained by such claimants or transferees. The description of the restructuring property in a sale or transfer agreement and any financing statement is sufficient if and only if the description refers to this act and the restructuring cost financing order creating such restructuring property. No instrument by which a transfer is created pursuant to this section need be recorded in order to perfect such transfer. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article nine of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that such secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed.

(c) The characterization of the sale, assignment or transfer as an absolute transfer and true sale and the corresponding characterization of the property interest of the purchaser, shall not adversely be affected or impaired by, among other things, the occurrence of any of the following factors: (i) commingling of revenues or other proceeds from transition charges with other amounts; (ii) the retention by the seller of: (A) a partial or residual interest, including an equity interest, in the restructuring property, whether direct or indirect, or whether subordinate or otherwise; or (B) the right to recover costs associated with taxes, payments in lieu of taxes, franchise fees or license fees imposed on the collection of transition charges; (iii) any recourse that the purchaser may have against the seller; (iv) any indemnification rights, obligations or repurchase rights made or provided by the seller; (v) the obligation of the seller to collect transition charges on behalf of an assignee, including but not limited to, any retention by the seller to bare legal title for the purpose of collecting transition charges; (vi) the treatment of the sale, assignment or transfer for tax, financial reporting or other purposes; (vii) any subsequent order of the authority amending a restructuring cost financing order pursuant to paragraph (b) of subdivision 4 of section five of this act; or (viii) any application of the adjustment mechanism as provided in subdivision 3 of section five of this act.

(d) An assignee or financing party shall not be considered to be a public utility or person providing electric service solely by virtue of the transactions described in this act.

§ 8. Rights and duties while restructuring bonds are outstanding. 1. Responsibilities of the authority. (a) For the purpose of investigating compliance with the provisions of this act and the applicable restructuring cost financing order, the authority shall have the right, jurisdiction, power and authority to examine the books and records of LIPA or any successor owner of the T&D system assets, the restructuring bond issuer, any other financing entity, any servicer, any third-party biller and any other person or entity that owns restructuring property or has the right to impose, bill or collect transition charges until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all financing costs relating to such restructuring bonds have been paid in full.

(b) Neither the authority nor any successor regulator may, in exercising its powers and carrying out its duties regarding regulation and ratemaking, consider restructuring bonds issued pursuant to the restructuring cost financing order to be the debt of any owner of the T&D

system assets, consider transition charges paid under the restructuring cost financing order to be revenue of any owner of the T&D system assets, or consider the approved restructuring costs or ongoing financing costs specified in the restructuring cost financing order to be costs of any owner of the T&D system assets or any affiliate, nor may the authority or any successor regulator determine that any action taken by any owner of the T&D system assets that is consistent with the restructuring cost financing order is unjust or unreasonable from a regulatory or ratemaking perspective; provided that, subject to the limitations set forth in subdivision 4 of section five of this act and the state pledge in section nine of this act, nothing in this subdivision shall (i) affect the authority to apply the adjustment mechanism as provided in subdivision 3 of section five of this act; (ii) prevent or preclude the authority from investigating the compliance of any owner of the T&D system assets and of any financing entity with the terms and conditions of a restructuring cost financing order and requiring compliance therewith; or (iii) prevent or preclude the authority or any successor regulator from imposing regulatory sanctions against any owner of the T&D system assets for failure to comply with the terms and conditions of a restructuring cost financing order or the requirements of this act. When setting other rates for any owner of the T&D system assets, nothing in this act shall prevent the authority or any successor regulator from taking into account the collection by such owner of servicing fees in excess of incremental costs of providing servicing services, or the collection by such owner of administration fees in excess of incremental costs of providing administration services; provided that this would not result in a recharacterization of the tax, accounting, and other intended characteristics of the financing, including, but not limited to, either of the following: (i) treating restructuring bonds as debt for federal income tax purposes; or (ii) treating any transfer of the restructuring property to the restructuring bond issuer or to any other financing entity as a true sale for bankruptcy purposes.

2. Duties of financing entities and any owner of T&D system assets.

(a) Any failure of any financing entity to apply the proceeds of restructuring bonds, or proceeds from the sale of restructuring property, in a reasonable, prudent and appropriate manner or otherwise comply with any provision of this act shall not invalidate, impair or affect any restructuring cost financing order, restructuring property, transition charge, or restructuring bonds.

(b) Any owner of T&D system assets, any servicer, any third-party biller and any other entity that bills or collects T&D rates shall simultaneously impose, bill and collect any transition charges applicable to consumers in the service area, including all consumers connected to the T&D system assets and taking electric delivery service located within the service area, shall allocate partial payments by consumers as provided in this act, shall terminate service to non-paying consumers on the same basis as termination of service is permitted for non-payment of T&D rates, shall exercise all enforcement rights of the owner or pledgee of the restructuring property for the benefit of such owner or pledgee, and shall remit any transition charge revenue to the owner or pledgee of the restructuring property.

§ 9. State pledge. (a) The state pledges to and agrees with the holders of restructuring bonds, any assignee and all financing entities that the state will not in any way take or permit any action that limits, alters or impairs the value of restructuring property or, except as

required by the adjustment mechanism described in the restructuring cost financing order, reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) Any person who issues restructuring bonds is permitted to include the pledge specified in subdivision (a) of this section in the restructuring bonds, ancillary agreements and documentation related to the issuance and marketing of the restructuring bonds.

§ 10. Choice of law. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in any restructuring property, transition charge or restructuring cost financing order, shall be the laws of the state of New York.

§ 11. Conflicts. In the event of conflict between this act and any other law regarding the attachment, assignment or perfection, or the effect of perfection, or priority of any pledge of, security interest in or transfer of restructuring property, this act shall govern to the extent of the conflict. In the event of conflict between this act and the public service law, the Long Island power authority act or any other law, this act shall govern to the extent of the conflict. Notwithstanding any provisions of law to the contrary, no approvals, notices or authorizations other than those specified in this act shall be required with respect to any restructuring cost financing order, and the transactions and contracts authorized in or contemplated by this act or any restructuring cost financing order, including but not limited to the incurrence and payment of any financing costs, the incurrence or payment of any approved restructuring costs, the issuance of restructuring bonds, the sale or other transfer of restructuring property, and any contracts and expenses incurred to facilitate the preparation of any restructuring cost financing order.

§ 12. Effect of invalidity on actions. Effective on the date that restructuring bonds are first issued under this act, if any provision of this act is held to be invalid or is invalidated, superseded, replaced, repealed or expires for any reason, that occurrence shall not affect any action allowed under this act that is taken by the authority, LIPA, the restructuring bond issuer, any owner of T&D system assets, an assignee, a collection agent, a financing party, a holder of restructuring bonds or a party to an ancillary agreement and any such action shall remain in full force and effect.

§ 13. Effectiveness of the act. The authority may not adopt its first restructuring cost financing order after the five year period after the effective date of this act.

§ 14. Severability. If any section, subdivision, paragraph or subparagraph of this act or the application thereof to any person, circumstance or transaction is held by a court of competent jurisdiction to be unconstitutional or invalid, the unconstitutionality or invalidity shall not affect the constitutionality or validity of any other section, subdivision, paragraph or subparagraph of this act or its application or validity to any person, circumstance or transaction, including, without limitation, the irrevocability of a restructuring cost financing order

ing bonds, the imposition of transition charges, the transfer or assignment of restructuring property or the collection and recovery of revenues from transition charges. To these ends, the legislature hereby declares that the provisions of this act are intended to be severable and that the legislature would have enacted this act even if any section, subdivision, paragraph or subparagraph of this act held to be unconstitutional or invalid had not been included in this act.

§ 15. Standing. (a) The owner of restructuring property, or the trustee representing holders of restructuring bonds, shall be expressly permitted hereby to bring actions against any owner of the T&D system assets, any third-party biller, or any other entity authorized to bill or collect T&D rates, any consumers in the service area or any other person or entity for failure to impose, bill, pay or collect any transition charges constituting part of the restructuring property then held pledged as security for such restructuring bonds or for enforcement of any other provision of this act or the applicable restructuring cost financing order.

(b) Except as provided in section three of this act, any court and the authority shall have jurisdiction over any actions for failure to impose, bill, pay or collect any transition charges or for enforcement of other provision of this act or any restructuring cost financing order.

§ 16. Third-party billing. If and to the extent that third parties are allowed to bill and/or collect any transition charges, the authority, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers, which generally would include (i) operational standards and minimum credit requirements for any such third-party biller, or require a cash deposit, letter of credit or other credit mitigant in lieu thereof, to minimize the likelihood that defaults by a third-party biller would result in an increase in transition charges thereafter billed to consumers, (ii) a finding that, regardless of who is responsible for billing, consumers shall continue to be responsible for transition charges, (iii) if a third party meters and bills for the transition charges, that the owner of the T&D system assets and any servicer must have access to information on billing and usage by consumers to provide for proper reporting to the restructuring bond issuer and to perform its obligations as servicer, (iv) in the case of a default by a third-party biller, billing responsibilities must be promptly transferred to another party to minimize potential losses, and (v) the failure of consumers to pay transition charges shall allow service termination by the owner of the T&D system assets on behalf of the restructuring bond issuer of the consumers failing to pay transition charges in accordance with service termination rules and orders applicable to T&D rates. Any costs associated with such third-party billing and/or collection shall be included as part of the recoverable ongoing financing costs or other rates or charges, as appropriate. Further, the authority and any successor regulator shall not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the then current ratings on any tranche or series of the restructuring bonds by any nationally recognized statistical rating organization designated by the restructuring bond issuer.

§ 17. This act shall take effect immediately.

§ 2. Severability clause. If any clause, sentence, paragraph, subdivi-

sion, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not take

affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part thereof directly involved in the controversy in which such judgment shall have been rendered. It is hereby declared to be the intent of the legislature that this act would have been enacted even if such invalid provisions had not been included herein.

§ 3. This act shall take effect immediately; provided, however, that the applicable effective date of Parts A through B of this act shall be as specifically set forth in the last section of such Parts.

The Legislature of the STATE OF NEW YORK **ss:**

Pursuant to the authority vested in us by section 70-b of the Public Officers Law, we hereby jointly certify that this slip copy of this session law was printed under our direction and, in accordance with such section, is entitled to be read into evidence.

DEAN G. SKELOS
Temporary President of the Senate

SHELDON SILVER
Speaker of the Assembly

Overview of Long Island Power Authority

Long Island Power Authority (LIPA) is a not-for-profit public utility and the owner of transmission and distribution networks in Long Island, New York. It is established by statute and the state governor has power to appoint board members. LIPA has entered into a management contracts with the Public Service Enterprise Group (PSEG), a publicly traded utility company in New Jersey, and PSEG's subsidiary now manages the billing and day-to-day operations of the distribution network.

Summary of LIPA Reform Act

Section 1(8) of Part B of the Long Island Power Authority Reform Act, 2013 (the LIPA Reform Act) provides the legislative purpose of the act, which is "to refinance outstanding debt of LIPA, a significant portion of which relates to the cost of constructing and financing the now abandoned Shoreham nuclear power plant". The Act authorizes the creation of a restructuring bond issuer for the limited purpose of "issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt". This section also makes it clear that it is the intention of the legislature to provide a statutory pledge (found in s. 9 of the LIPA Reform Act) that until the restructuring bonds are paid in full, "the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds".

The definitions in section 2 of the LIPA Reform Act provide some clarity to the mechanisms for the securitization regime. Restructuring bonds are issued by the "restructuring bond issuer" (which is established under section 4 of the LIPA Reform Act and known as the "Utility Debt Securitization Authority", or UDSA) and secured by the "restructuring property", which is essentially the property interest in a future revenue stream. In section 2(13), "restructuring property" is defined to include the property rights and interests in the "transition charges". As defined in s. 2(21), transition charges are established and may be amended from time to time in accordance with a restructuring cost financing order, and they are a component of the delivery line on the utility bills.

Section 3 provides the procedures for issuing restructuring bonds by the restructuring bond issuer, and includes appeal procedures and public hearing provisions. Section 4 provides the authority to establish the UDSA as a public corporation, the scope of its activities and its governance structure. It should be noted that section 4(2)(a)(i) provides that "the restructuring bond issuer shall only issue and sell restructuring bonds once" (please also see summary of 2015 amendments below). The UDSA also issues the restructuring cost financing orders in accordance with section 5.

Section 6 sets out the features of the restructuring bonds. Section 6(1) limits bond purchaser's remedies to the restructuring property, i.e. the property interest in a future revenue stream. The restructuring bonds are tax-exempt (section 6(2)), and are not debt of the state (section 6(3)).

Section 7 governs the restructuring property and creates a property interest and security interest in the future revenue stream arising from "transition charges". Section 7(1)(c) provides that "[t]he restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of restructuring property may be pledged to secure the payment of restructuring bonds", and "revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs."

Section 8(2) provides that any owner of the transmission and distribution network or any other entity that collects the delivery charges on behalf of the owner shall impose the transition charges on the consumers, and shall remit such revenues to the owner or pledgee of the restructuring property.

Section 9 provides the pledge from the state not to take actions to impair the value of the restructuring property. Sections 10 to 17 include procedural provisions such as conflicts, third-party billing and standing.

Summary of 2015 Amendments to LIPA Reform Act

The LIPA Reform Act was further amended in 2015 to permit the issuance of additional restructuring bonds by UDSA or a separate "Utility Debt Securitization Authority No. 2" up to an aggregate maximum amount (including the previously-issued Restructuring Bonds) of $4.5 billion. Any additional issuance of restructuring bonds, whether issued by UDSA or by a new issuer, will be separately secured by distinct collateral pursuant to a new financing order and transaction documents.

Background Information on Duke Energy and Duke Energy Florida

Duke Energy is a publicly-traded utility company with electricity generation and transmission networks in the Carolinas, Florida, Ohio, Kentucky and Indiana. Duke Energy Florida ("**DEF**") is a subsidiary of Duke Energy and distributes power over much of central and north Florida. The Florida Public Service Commission (the "**Commission**") regulates DEF and other electric utilities in Florida (including municipal or investor-owned electric utility, and rural electric cooperative which owns, maintains, or operates an electric generation, transmission, or distribution system).

Summary of Legislative Provisions on Asset Securitization

In 2015, section 366.95 of the Florida Statutes is created to enable "financing for certain nuclear generating asset retirement or abandonment costs". This section includes asset securitization provisions to allow investor-owned electric utilities to set up a special-purpose vehicle ("**SPV**") to issue secured bonds to finance the utility's costs ("nuclear asset-recovery costs") associated with the "early retirement or abandonment of a nuclear generating asset unit". These provisions were likely introduced in response to the closing of Duke Energy's Crystal River nuclear plant in 2013. According to DEF, "[t]his process, called Asset Securitization, will save customers approximately $600 million as compared to traditional cost recovery methods."[1]

Subsection (1) sets out the definitions of some key terms used in the section. The definition of "Assignee" provides examples of different legal structures to set up the SPV, including corporation, limited liability company, trust, partnership or public authority. The definition of "utility" limits the scope of this section to "investor-owned electric utilities" by referring to the same definition in another section of the statute book. "Nuclear asset-recovery bonds" are issued by the utility or assignee, and secured by the "nuclear asset-recovery property", which is the property interest in the revenue stream arising from "nuclear asset-recovery charges".

Subsection (2) requires the utility to submit a petition to the Commission for a financing order before the nuclear asset-recovery bonds can be issued. The petition needs to demonstrate that securitization would result in cost savings or would avoid or mitigate rate impacts compared to the traditional method of cost recovery. Subsection (2) further requires the Commission to address specific areas in its financing order, including: (i) the amount of nuclear asset-recovery costs to be financed by the bonds and the period during which the charges can be imposed on customers; (ii) detailed fact findings on cost-effectiveness and rate impacts; (iii) a requirement that charges be nonbypassable and paid by all existing and future customers receiving transmission or distribution

[1] Duke Energy announcement, "Duke Energy Florida cuts rates for customers", February 8, 2016 <http://www.prnewswire.com/news-releases/duke-energy-florida-cuts-rates-for-customers-300216799.html>

services; and (iv) mechanisms for periodic adjustment in the nuclear asset-recovery charges.

Subsection (3) provides that the bonds are considered debt for the utility only for federal income tax purposes, and limits the Commission's power to impose certain requirements in the financing order.

Subsection (4) sets out specific requirements for utility bills, such as showing the nuclear asset-recovery charge as a separate line item on the utility bill.

Subsection (5) creates a property right in the nuclear asset-recovery charges, which exists even if the charges have not been billed and may be pledged to secure the nuclear asset-recovery bonds. The utility may create a wholly owned subsidiary (the SPV) for the limited purpose of "acquiring, owning, or administering nuclear asset-recovery property or issuing nuclear asset-recovery bonds under the financing order", which also protects the nuclear asset-recovery property from potential creditor claims. This subsection also provides priority rules for competing security interests in the nuclear asset-recovery property. Subsections (6) to (8) provides further guidance in connection with the transfer of nuclear asset-recovery property to an SPV.

Subsection (9) provides that the nuclear asset-recovery bonds are not debt of the state of Florida. An issue of such bonds does not obligate the state to levy any tax for its payment, although the state may provide bond guarantees or enhancements. Subsection (10) provides statutory authority for certain entities to invest in nuclear asset-recovery bonds. Subsection (11) provides a pledge from the state not to take actions to impair the value of the nuclear asset-recovery property. Subsections (12) to (15) include boilerplate provisions such as conflicts, severability and penalties for incompliance.

Duke Energy Florida's Financing Order and Bond Issuance

In November 2015, the Commission released Financing Order PSC-15-0537-FOF-EI to approve DEF's petition for the issuance of nuclear asset-recovery bonds in the amount of $1,283,012,000 plus financing costs. Under the financing order, DEF is authorized to impose a nuclear asset-recovery charge to repay the nuclear asset-recovery bonds and associated financing costs, which will be collected on a per-kWh basis from all applicable customer rate classes. The financing order authorizes DEF to impose the charge for a period not exceeding 276 months (23 years) from the issuance of the nuclear asset-recovery bond.

DEF created Duke Energy Florida Project Finance LLC for the issuance of of nuclear asset-recovery bonds in June 2016.

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols and Definitions, which is available here, for further information.

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CREDIT OPINION
18 February 2016

Pre-Sale

Closing Date
April 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016A

Presale Report - Long Island Power Authority-Sponsored Securitization of Utility Cost Recovery Charge Assets

Capital Structure

Exhibit 1
Provisional (P) Ratings*

Series	Expected Amount	Tax Status	Interest Rate	Legal Maturity**	Provisional Ratings
2016A	[$381,730,000]	Tax-Exempt	Fixed	[12/15/2028]	(P) Aaa (sf)

The ratings address the expected loss posed to investors by the legal final maturity date. In Moody's opinion, the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the securitization. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors.
* Principal amounts and legal maturity dates are preliminary and subject to change
** Reflects the latest legal maturity date among the tranches in the series
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016, and Moody's Investors Service

Summary Rating Rationale

The Utility Debt Securitization Authority (the issuer) intends to issue Restructuring Bonds, Series 2016A. The bond issuance will enable the Long Island Power Authority (LIPA, Baa1 stable) to retire a portion of its outstanding debt. This will be the third utility cost recovery charge (UCRC) securitization that LIPA has sponsored since 2013. These bonds are backed by restructuring property which consists of, among other things, the right to impose usage-based restructuring charges on all current and future retail electric customers in LIPA's service area.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of LIPA's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 18 February 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

and diversity of the ratepayer base in LIPA's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the 2016A restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of Legislation and Financing Order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015 permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other UCRC securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to UCRC bondholders that it will not 1) take or permit any action that limits, alters or impairs the value of the restructuring property, or 2) except as required by the adjustment mechanism, reduce, alter or impair restructuring charges until the bonds have been repaid in full (the state pledge). In addition, the LIPA Reform Act and financing order contain the typical strong true-sale and security interest provisions.

LIPA's irrevocable financing order authorizes the creation of restructuring property, which grants the issuer the irrevocable right to impose, bill and collect irrevocable, non-bypassable restructuring charges based on electricity usage from all of LIPA's existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

The financing order authorizes LIPA to recover the costs of retiring certain of its outstanding debt and the issuer to recover the costs of issuing, supporting and servicing the bonds. The issuer will recover these costs by collecting restructuring charges until the bonds are repaid in full, without any specified time limit.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually, and if necessary, semiannually (and quarterly after the last scheduled maturity date of the bonds of any series), in each case to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time without limitation as to frequency, if the servicer deems necessary to ensure timely bond payments. New to the 2016A transaction, the servicer may elect to perform an additional voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). Also, the timing of the mid-year and annual true-ups has changed to help smooth charges over the course of the year.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in LIPA's service area is a credit strength. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (89%) and commercial customers (10%). Unlike most other UCRC securitizations, the service area includes very few industrial customers, which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Credit Challenges

Challenges to LIPA Reform Act and Financing Order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the securitizable restructuring property; however we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the LIPA Reform Act. Therefore, the only way to repeal or amend the LIPA Reform Act, or for LIPA to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws

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prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

Potential for Insufficient Collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration and self-generation. PSEG-LI's estimates of market demand, energy prices and growth within LIPA's service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur annually, semiannually and on an interim basis as needed.

Relatively High Restructuring Charge: LIPA expects the securitization's initial restructuring charge to represent around [0.79%] of the total monthly bill that an average 1,000 kilowatt hour (kWh) residential customer in LIPA's service area will receive as of June 1, 2016. The initial restructuring charge for the 2016A transaction, combined with the current restructuring charge for the 2013 and 2015 transactions, is expected to represent approximately [6.91%] of a typical residential customer's bill, and is relatively high compared to other utility cost recovery transactions. This concern is mitigated by LIPA's securitization offset rider, which reduces LIPA's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Exhibit 2

Asset Characteristics

Assets:	Restructuring property consisting of the issuer's irrevocable right to impose, charge and collect irrevocable, non-bypassable usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up adjustment mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full
Service Area:	Approximately 1.1 million customers in Nassau and Suffolk counties[1] and the Rockaway Peninsula

1. Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	[$381,730,000]1
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Collection Accounts and Debt Service Reserve Account
Sponsor/Seller/Initial Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority, a special purpose corporate municipal instrumentality of the State of New York
Operations Agent:	PSEG-Long Island
Trustee:	Bank of New York Mellon (Aa1/Aa2 stable, a1) 2

1. Preliminary and subject to change based on market conditions
2. The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Offering Statement dated February 18, 2016

Assets Overview

The collateral for this pool is the restructuring property consisting of the irrevocable right to impose, charge and collect non-bypassable, usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow LIPA to finance the retirement of a portion of its outstanding debt through the issuer's issuance of restructuring bonds, resulting in savings to LIPA's customers on a net present value basis. The securitization law gives LIPA the right to impose restructuring charges, which are the key asset of this securitization.

Prior to the legislature's amendment of the securitization law on March 26, 2015, the law permitted only one issuance of restructuring bonds by the issuer, and that issuance took place in December 2013 pursuant to Financing Order No. 1. The amended securitization law permits LIPA's Board of Trustees to adopt additional financing orders to, among other things, authorize the creation of additional restructuring property and the issuance of additional restructuring bonds in an aggregate additional amount not to exceed $4.5 billion (inclusive of the $2,022,324,000 previously issued 2013 restructuring bonds and the $1,002,100,000 previously issued 2015 restructuring bonds). After the 2016A issuance, LIPA will have authority to issue an additional [$1,093,846,000] billion of restructuring bonds under the securitization law.

Specifically, the securitization law coupled with the financing order authorizes LIPA to sponsor multiple bond issuances to finance the recovery of the costs of retiring a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds.

Similar to other UCRC securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that will be incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

Specifically, the State of New York pledges to and agrees with the bondholders, the issuer and LIPA that the State will not in any way: 1) take or permit any action that limits, alters or impairs the value of the restructuring property; or 2) except as required by the adjustment mechanism authorized by the securitization law and set forth in the financing order, reduce, alter or impair restructuring charges that are imposed, collected and remitted for the benefit of the bondholders until all principal of and interest on the bonds and all ongoing financing costs have been repaid in full.

The state pledge provides protection to bondholders; to the extent LIPA or the State of New York have obligations under the financing order, the LIPA Reform Act provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to change the securitization law would be through a legislative action which would be subject to the state pledge.

The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims.

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

Hawkins Delafield & Wood LLP, LIPA's special counsel, will provide a legal opinion prior to securitization closing to the effect that the bondholders (or the trustee acting on their behalf) could successfully challenge under the contracts clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Hawkins Delafield & Wood LLP, LIPA's bond counsel, will provide a legal opinion prior to securitization closing to the effect that under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The Financing Order

The securitization law authorizes LIPA's securitization program, while a separate financing order implements each issuance of bonds under the program.

On June 26, 2015, LIPA Trustees adopted Financing Order No. 3 (the financing order), together with Financing Order No. 2 and Financing Order No. 4 and on July 15, 2015, the New York Public Authorities Control Board approved them. On August 14, 2015, they became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, and the 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property.

The issuer is issuing the 2016A restructuring bonds pursuant to Financing Order No. 3, which authorizes: 1) the creation of the 2016A restructuring property; 2) LIPA to sell the 2016A restructuring property to the issuer under the financing order (the 2016A restructuring property is created simultaneously with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the 2016A restructuring property from LIPA and pay upfront financing costs; and 6) LIPA to use the proceeds of the sale of the 2016A restructuring property to retire a portion of its outstanding debt

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with LIPA setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of LIPA to review and approve the issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The 2016A Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and non-bypassable restructuring charges from all of LIPA's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism to ensure the expected collection of amounts sufficient to pay the amounts specified above on time. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from LIPA's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the Public Service Commission.

Restructuring Charges are Non-Bypassable

The securitization law provides that the restructuring charges are non-bypassable. "Non-bypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (LIPA's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if LIPA no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

Self-Generation in the Service Area is Low

Self-generation, which primarily includes solar and wind, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Self-generation is currently very small in the service area at roughly 0.3% of energy sales. LIPA forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. Certain customers that self-generate will only be responsible for paying restructuring charges based upon their "net-billed" consumption.

Municipalization

Municipalization, or the transfer of the T&D system assets to a municipal owner, would not affect restructuring charge collections because the customers are required to pay the restructuring charges even if the T&D system assets are no longer owned by LIPA. Since 1998, no municipalizations have occurred.

The Service Area

LIPA provides electric transmission and distribution services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which LIPA provided electric transmission and distribution services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. Of these, approximately 89.3% were residential, 10.2% commercial (with very few industrial customers), 0.5% street lighting and 0.0% other public authorities; the average number of customers has been fairly stable over the last 10 years, with very small year-over-year changes ranging from -0.2% to 0.7%. Retail electric usage was 48.2% residential, 48.8% commercial, 0.7% street lighting and 2.2% other public authorities.

In the year ending December 31, 2015, LIPA's largest customer, the Long Island Rail Road, accounted for less than 2.0% of LIPA's total sales, and LIPA's top 10 customers accounted for approximately 7.0% of LIPA's total sales.

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs (the revenue requirement)

3. mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
5. more frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. after the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Under the financing order, the adjustments are to be based on actual charge collections and the servicer's updated assumptions for projected future charge collections, projected uncollectibles and loss in collection of billed charges, and future payments and expenses relating to the restructuring property and the bonds.

No Third-Party Billing/Collection of Charges

Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor regulator will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

Assets Analysis

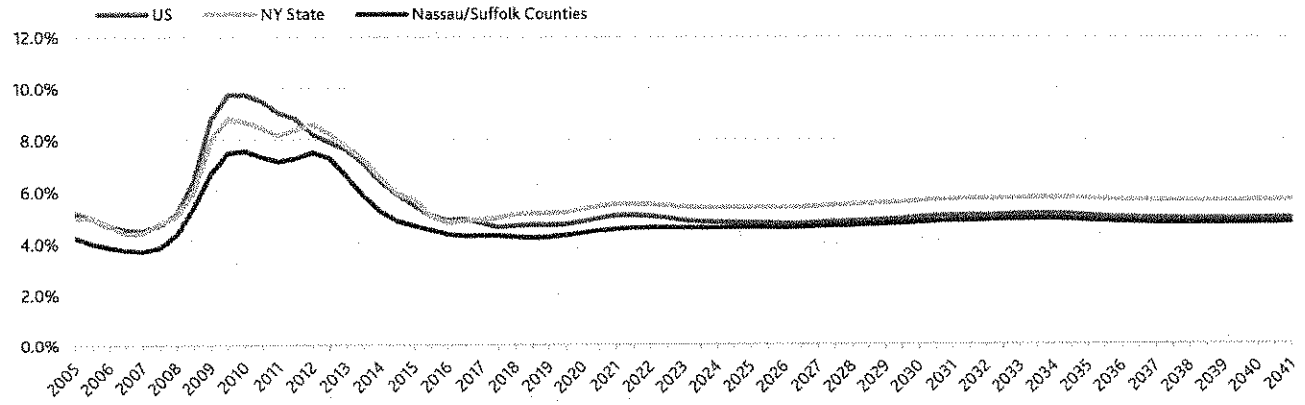
Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, 19 colleges and universities and core research institutions, such as Brookhaven National Laboratory, Cold Spring Harbor Laboratory, and the technology and science developmental centers at Stony Brook and Farmingdale Universities that specialize in the areas of biotechnology, computer sciences, wireless and internet technologies, and energy.

Long Island's median household income is substantially above that of New York and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $98,401 and $88,323, respectively, considerably higher than the $58,687 for New York and the $53,482 for the US. According to LIPA, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 4 shows that the Nassau-Suffolk unemployment rate is lower than that of the US, and we forecast the rate will remain lower.

Exhibit 4
Unemployment Rate*



* Data does not include the Rockaways, Queens, which is also part of the service area.
Source: US Bureau of Labor Statistics and Moody's Analytics

Exhibit 5 shows Moody's Analytics' forecasted average year-over-year changes in various economic stability measures for the service area, compared with New York and the US. The data include Nassau and Suffolk counties, but exclude the Rockaways in Queens, NY. The exhibit shows that forecasted population growth will be relatively flat.

Exhibit 5
Forecasted Average Year-Over-Year Changes in Population and Economic Stability Measures
(Data for 2016-2041, the scheduled maturity date of the bonds)

	Nassau-Suffolk *	New York	US
Population	0.1%	0.1%	0.7%
Households	0.3%	0.4%	0.9%
GDP (Chained 2009 $)	1.6%	1.4%	2.0%
Per Capita Income	3.3%	3.6%	3.6%
Employment (non-farm payroll)	0.5%	0.5%	0.8%

* Does not include the Rockaways, Queens, which is part of the service area
Source: Moody's Analytics

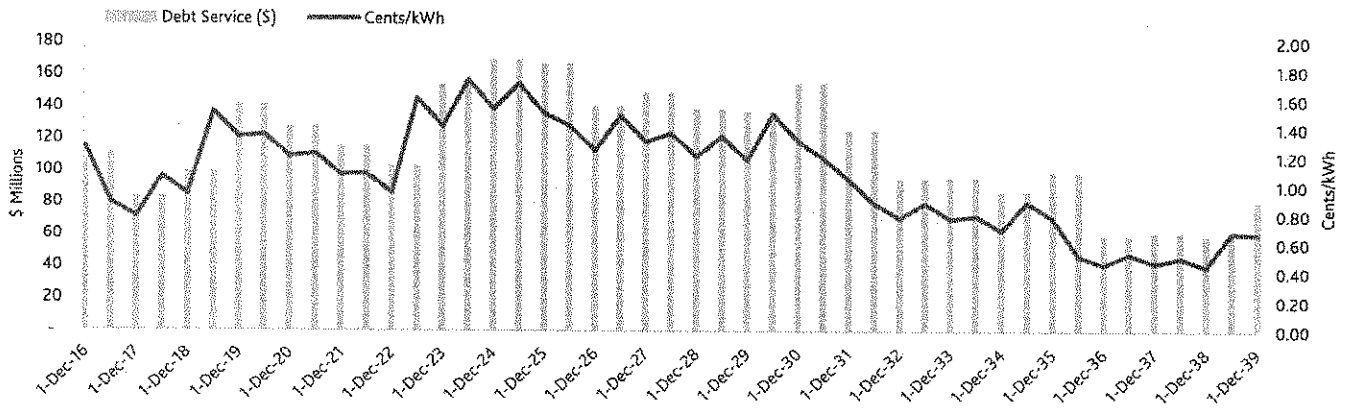
Remote Risk of Severe Ratepayer Base Declines

The securitization's performance is exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's diverse ratepayer base.

LIPA expects the combined initial restructuring charge for the 2013, 2015 and 2016A transactions to be around [6.91%] of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 1, 2016, which is higher than most other UCRC securitizations we rate. The [6.91%] is preliminary and subject to change based on market conditions.

Exhibit 6 shows LIPA's expected restructuring charge, which is the same for all customer classes, and annual debt service of the bonds over the securitization's life. The exhibit shows that the restructuring charge will vary over time to cover the unlevel debt service of the bonds, which mirrors the unlevel debt service of the retired LIPA bonds.

Exhibit 6
Restructuring Charge (Cents/kWh) and Annual Debt Service*



* Preliminary and subject to change based on market conditions.
Source: LIPA; Moody's calculations

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a typical residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand.

Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We looked at three scenarios. In our base case, we assumed 1) electricity consumption as per LIPA's projections, 2) annual net charge-offs as per LIPA's projections, 3) collection curve as per LIPA's projections and 4) actual servicing fee and other expenses (Scenario A).

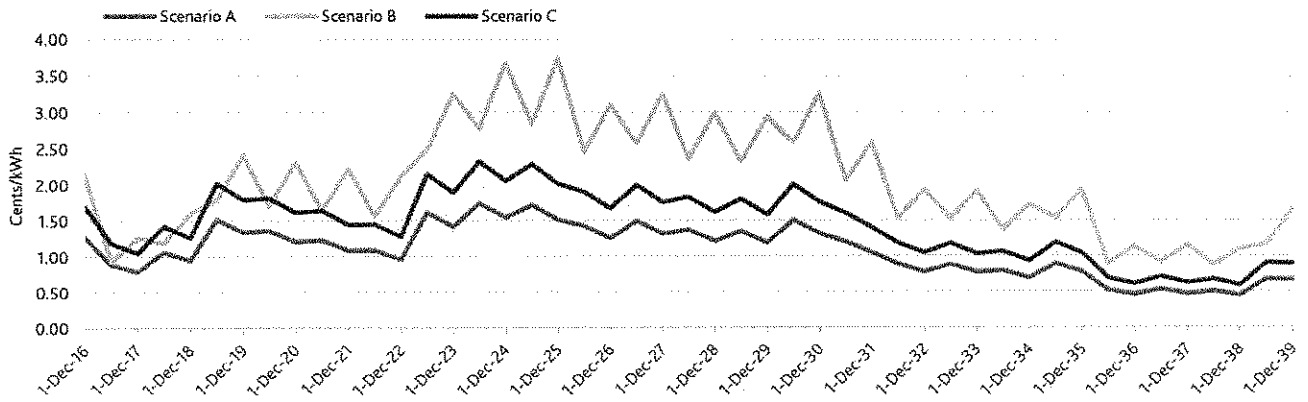
In our first stress scenario, we assumed 1) electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers, 2) annual net charge-offs are the same as in base case, 3) collection curve is the same as in base case, 4) loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year and 4) replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case (Scenario B).

In our second stress scenario, we assumed 1) electricity consumption is reduced by 25% permanently against the first year base case projection, 2) annual net charge-offs the same as in base case, 3) collection curve is the same as in base case and 4) servicing fee and all other fees the same as in base case (Scenario C).

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 7 shows the projected restructuring charges for customers in cents per kWh, and Exhibit 8 shows the projected restructuring charge as a percentage of the typical residential customer's total bill assuming monthly usage of 1,000 kWh over the securitization's life.

Exhibit 7

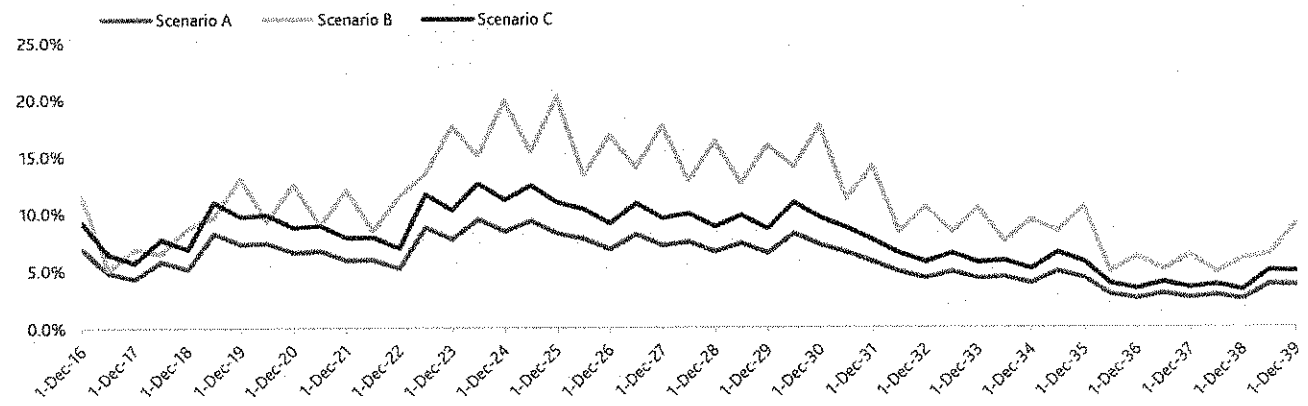
Restructuring Charge (Cents/kWh)



Source: LIPA and the servicers; Moody's calculations

Exhibit 8

Restructuring Charge as a Percentage of a Typical Residential Customer's Total Bill



Source: LIPA and the servicers; Moody's calculations

Forecasting Electricity Consumption

The company monitors the accuracy of each forecast by conducting variance analysis on a monthly basis taking into account weather impacts on kWh sales and deviations from forecast within the customer count. LIPA factors the impact of weather and the growth in self generation, energy efficiencies and the use of electric vehicles into its forecasts.

Exhibit 9 shows LIPA's annual forecast variance for ultimate electric delivery by customer class.

Exhibit 9

Annual Forecast Variance for Ultimate Electric Delivery (MWh)

	2011	2012	2013	2014	2015
Residential	4.3%	-2.4%	-2.7%	-4.3%	0.5%
Commercial	-1.0%	-3.6%	-2.4%	-1.7%	-2.1%
Street Lighting	0.2%	-2.2%	-4.4%	1.7%	-3.8%
Other Public Authorities	5.5%	-13.6%	-4.2%	3.1%	2.5%
Total	1.6%	-3.2%	-2.6%	-2.8%	-0.8%

Note: Negative variance means that the actual electric delivery is lower than the forecasted electric delivery.
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Additional Assets Analysis

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, LIPA or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

PSEG LI will perform, and is capable of performing, LIPA's key servicing duties, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among other things. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

PSEG is a publicly traded energy and energy services company. As of September 30, 2015, it had total assets of approximately $36.5 billion, latest twelve months revenues of approximately $10.9 billion; and employed approximately 12,700 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company (PSE&G), New Jersey's largest regulated electric and gas transmission and distribution utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets, pursuant to the securitization documents.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Loss Experience

Exhibit 10 shows the annual net charge-offs for LIPA, including net charge-offs of customers as part of LIPA's annual charge-off reconciliation process.

Exhibit 10

Net Charge-Offs as a Percentage of Total Billed Retail Electricity Service Revenues

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Billed Electric Revenues ($000)	3,620,532	3,413,091	3,834,255	3,753,765	3,572,133
Net Charge-Offs ($000)	24,753	19,750	20,969	24,659	23,948
Percentage of Billed Revenue	0.68%	0.58%	0.55%	0.66%	0.67%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Days Sales Outstanding

Exhibit 11 shows the average number of days that LIPA's bills remained outstanding during each of the calendar years below.

Exhibit 11

Average Days Sales Outstanding

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Average Days Sales Outstanding	38.55	39.23	39.40	37.13	36.78

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Delinquency Experience

Exhibit 12 shows the delinquency experience of LIPA during each of the calendar years below.

Exhibit 12
Average Monthly Delinquencies of Total Annual Billed Retail Electricity Delivery Service Revenues

	2011	2012	2013	2014	2015
30-59 days	$ 52,766	$ 50,348	$ 59,196	$49,980	$42,775
60-89 days	$ 28,940	$ 28,018	$ 32,104	$24,937	$21,223
90+ days	$108,208	$116,791	$135,828	$86,419	$87,580

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Securitization Structure Overview

LIPA intends to issue one series of tax-exempt, fixed rate bonds, Series 2016A, secured by the collateral on a pari passu basis. Some of the Series 2016A Bonds will be serial bonds, while others will be term bonds, with the term bonds subject to mandatory sinking fund payments. The issuer will have the option to redeem the Series 2016A Bonds with a legal final maturity date on or after [ ], in whole or in part and in any order, on and after [ ]. *All dates in this paragraph will be determined prior to closing.*

Securitization Structure Description

Bond Structure

The issuer will make payments on the bonds semiannually, on June 15 and December 15 of each year, beginning in December 2016. Interest will be paid pro rata among the tranches.

All tranches of bonds will be paid pro rata if the bonds are accelerated following an event of default under the indenture. Partial payments of any scheduled payments will be allocated pro rata between tranches of bonds with the same legal final maturity date.

Optional Redemption

The issuer will not have the option to redeem the Series 2016A Bonds with a final maturity date prior to [ ]. The issuer will have the option to redeem the Series 2016A Bonds with a final maturity date on or after [ ], in whole or in part and in any order, on and after [ ], at a redemption price of 100% of the principal amount of the Series 2016A Bonds to be redeemed, plus accrued interest to the redemption date. *All dates in this paragraph will be determined prior to closing.*

Indenture Accounts

The trustee will hold the collection account in its name and will deposit the restructuring charge collections and all other amounts it receives with respect to the collateral. The collection account will consist of five subaccounts: the general subaccount, the excess funds subaccount, the operating reserve subaccount, the debt service reserve subaccount and the upfront financing cost subaccount.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other ongoing financing costs to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;

6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;
7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates.

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

The annual true-up adjustment will be calculated to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment.

Events of Default

The Events of Default under the indenture are:

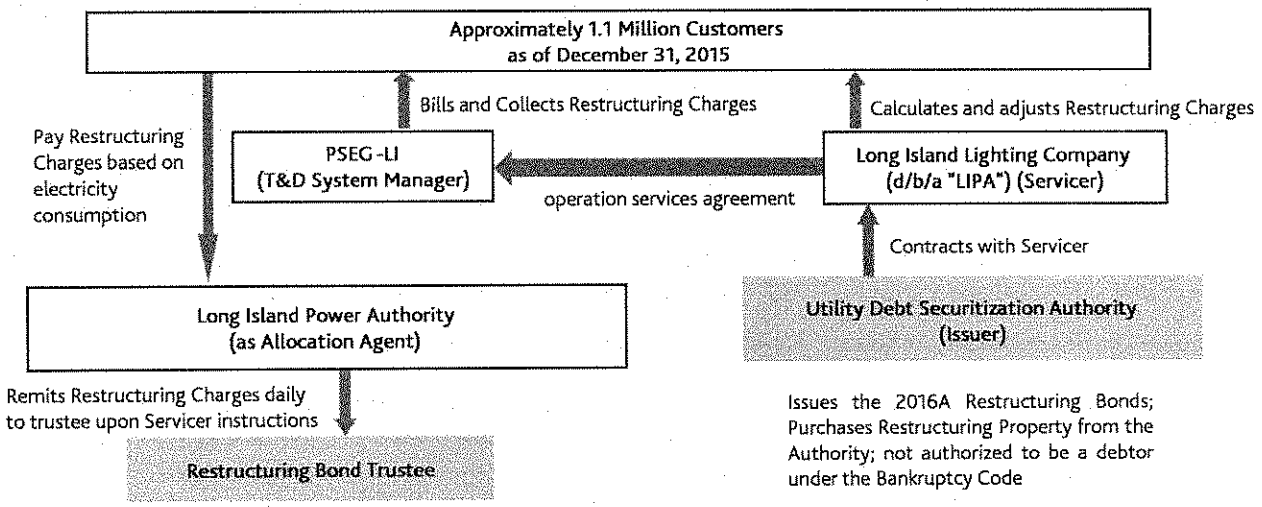
1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period); or
5. an action violating the financing order or state pledge.

Securitization Structure Analysis

Securitization Parties and Responsibilities

Exhibit 13 provides a general summary of the key securitization parties, their roles and their various relationships to the other parties.

Exhibit 13
Securitization Parties and Responsibilities

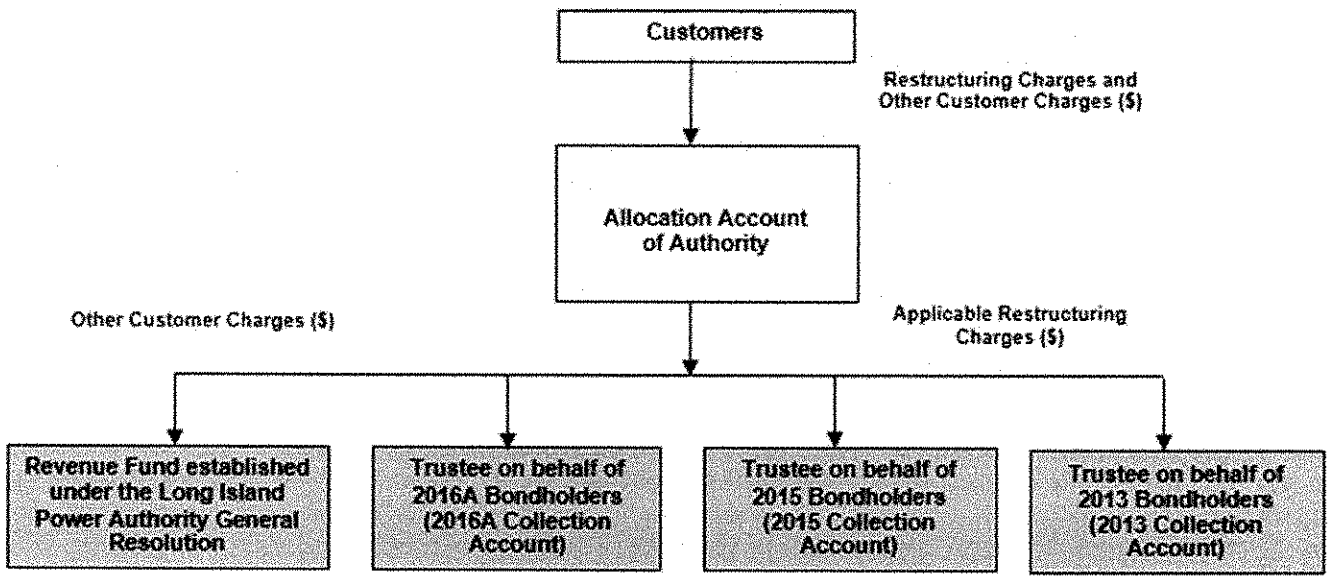


Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Flow of Funds

Exhibit 14 shows a general summary of the securitization's flow of funds: PSEG-LI will bill and collect the restructuring charges from LIPA's customers on behalf of the servicer. The servicer will be required to cause all customer payments (including restructuring charge collections) to be deposited into the allocation account, which LIPA established to hold all payments until the checks clear. Initially, the account will be held by J.P. Morgan Chase Bank. If customers make payments directly to the servicer instead of to the allocation account, the servicer must remit such payments to the allocation account within two business days' receipt by the servicer or LIPA. LIPA, as allocation agent, will control and administer the allocation account for the benefit of the trustee for the holders of the bonds and the trustee for the holders of LIPA bonds. On each business day, the allocation agent must transfer to the collection account the amount of restructuring charge collections that the servicer estimates to have been received and deposited into the allocation account on such day.

Exhibit 14
Flow of Funds



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Legal Structure

The primary steps of the securitization are as follows:

1. The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under chapter 9 or any other provision of the Bankruptcy Code. The securitization law formed the issuer solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.
2. The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from LIPA and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.
3. LIPA will use the proceeds from the sale of its restructuring property to retire certain of its outstanding debt. LIPA will act as the servicer of the restructuring property under a servicing agreement with the issuer and as the issuer's administrator under an administration agreement with the issuer. PSEG-LI will act as LIPA's service provider and will perform LIPA's key servicing duties under an operations servicing agreement with LIPA.

Sponsor and Seller

LIPA will be the securitization's sponsor and the seller of the restructuring property. LIPA is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a chapter 9 debtor pursuant to its enabling legislation.

LIPA took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of LIPA through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

LIPA is governed by a Board of Trustees (LIPA Trustees) and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. LIPA is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

Pursuant to LILCO's organizational documents, LIPA conducts and manages LILCO's business and affairs. Accordingly, LILCO is controlled by LIPA.

LIPA and LILCO are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LILCO conducts the electric business in the service area and is responsible for providing service to customers in the service area. LIPA and LILCO are also parties to an administrative services agreement pursuant to which LIPA provides personnel, personnel-related services and other services necessary for LILCO to provide electric service in the service area.

To assist LIPA (acting through LILCO) in providing electric service in the service area, LIPA and LILCO have entered into operating agreements to provide them with the operating personnel and a significant portion of the power supply resources necessary for LILCO to continue to provide such electric service. From 1998 through 2013, National Grid plc, certain of its subsidiaries (National Grid subs) or their predecessors performed most such operations.

Beginning in 1998, a National Grid sub was the manager of LILCO's electric T&D system under a management services agreement which expired at the end of 2013. Beginning January 2014, PSEG-LI assumed the role from the National Grid sub. T&D system management services include, among other functions, the day-to-day operation and maintenance of the T&D system, customer service, billing and collection, meter reading and forecasting energy consumption.

In July 2013, New York Governor Andrew Cuomo signed the LIPA Reform Act, codified as Chapter 173, Laws of New York, into law. On March 30, 2015, the New York State Assembly and Senate adopted Chapter 58 of the Laws of New York, 2015, which amended the LIPA Reform Act to authorize the issuer to issue additional restructuring bonds. On April 13, 2015, the Governor signed Chapter 58 into law. On May 13, 2015, the time for filing any challenges to the LIPA Reform Act, as amended, expired and no such challenges were filed.

The LIPA Reform Act effectively shifted the major operational and policy-making responsibilities for the T&D system, including significant responsibilities relating to capital expenditures, budgets and emergency response, from LIPA to PSEG-LI. PSEG-LI's scope of services and LIPA's reserved rights have been adjusted to reflect the shift in operations, management and policy making responsibilities while enhancing LIPA's oversight rights. The LIPA Reform Act also requires that staffing be kept at levels only necessary to ensure that LIPA is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and to oversee the activities of PSEG-LI.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

MOODY'S INVESTORS SERVICE

CREDIT OPINION
29 July 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016B

Long Island Power Authority-Sponsored Utility Cost Recovery Bonds

Capital Structure

Exhibit 1

Provisional (P) Ratings*

Series	Provisonal Rating	Expected Amount	Tax Status	Coupon	Payment Frequency	Expected Maturity	Legal Final Maturity**
Series 2016B	(P)Aaa (sf)	$475,000,000	Tax Exempt	Fixed	Semi-annual	12/15/2033	12/15/2035

The ratings address the expected loss posed to investors by the legal final maturity. In our opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Our ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.

* Principal amounts and legal maturity dates are preliminary and subject to change

** Reflects the latest legal maturity date among the tranches in the series

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Summary Rating Rationale

We have assigned provisional ratings to the single series of bonds (Series 2016B bonds, or the bonds) that Utility Debt Securitization Authority (the issuer) will issue. The Long Island Power Authority ("the Authority", Baa1 stable), which is a corporate municipal instrumentality and a political subdivision of the State of New York, is sponsoring the transaction. The Authority wholly owns the Long Island Lighting Company (doing business as "LIPA", the servicer), which provides electric transmission and distribution services in most of Nassau and Suffolk counties and a portion of Queens county. New York State legislation formed the issuer to securitize a special charge (the restructuring charge) imposed on the Authority's customers' utility bills. The Authority will use the proceeds of the securitization to retire a portion of its outstanding debt. The Series 2016B bonds will be the fourth utility cost recovery bonds sponsored by the Authority since 2013.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 28 July 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

The primary collateral backing the Series 2016B bonds is the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area (the restructuring property). New York State legislation, along with an irrevocable financing order adopted by the Authority on June 26, 2015, authorizes the creation of the restructuring property.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of the Authority's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability and diversity of the ratepayer base in the Authority's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of legislation and financing order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015, permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other utility cost recovery charge securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order (the state pledge). In addition, the securitization and financing order contain the typical true-sale and security interest provisions.

The Authority's irrevocable financing order authorizes the Authority to recover specified costs of retiring its corporate debt by collecting restructuring charges. The restructuring property grants the issuer the irrevocable right to impose, bill and collect irrevocable, nonbypassable restructuring charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. Nonbypassable refers to the requirement that the charges be levied on all of the Authority's existing and future retail electric customers receiving transmission and distribution services in its service area, including customers of any Authority successor or assignee.

True-up adjustment mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually and, if necessary, semiannually, to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments at any time if the servicer deems necessary to ensure timely bond payments. The servicer may also elect to perform a voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). This voluntary mid-year adjustment helps reduce the volatility of the restructuring charge to customers. The inclusion of an operating reserve account and a debt service account provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between true-ups.

Affluent ratepayer base: The size, economic stability and diversity of the ratepayer base in the Authority's service area are credit strengths. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (54% by revenue) and commercial customers (43% by revenue).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Experienced servicer: LIPA has considerable prior servicing experience with restructuring charges, including acting as servicer for the Authority's three outstanding utility cost recovery charge securitizations.

Although LIPA is the named servicer for this securitization, PSEG Long Island LLC (PSEG-LI, unrated), a subsidiary of Public Service Enterprise Group Incorporated (Baa2, positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others. PSEG-LI currently performs these same functions for the three outstanding utility cost recovery charge securitizations sponsored by the Authority. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

Credit Challenges

Challenges to securitization law and financing order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the restructuring property. However, we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for the Authority to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered. Several past challenges to securitization laws such as this in other jurisdictions have been unsuccessful.

Potential for insufficient collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. The Authority's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, by which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments are required to occur annually and can occur semi-annually and at the discretion of the servicer on an interim basis as needed.

Relatively high restructuring charge: The Authority expects the securitization's initial restructuring charge to represent around 2.55% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in the Authority's service area will receive as of June 15, 2017. The initial restructuring charge for the 2016B transaction, combined with the current restructuring charge for the 2013, 2015 and 2016A transactions, is expected to represent approximately 7.8% of a 1,000 kWh residential customer's bill. This percentage charge is relatively high compared to charges in other utility cost recovery bond transactions. For context, the three most recent utility cost recovery bond issuances we rated, Duke Energy Florida Project Finance, LLC, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 2.5%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively. A high cumulative recovery charge could incentivize a legal challenge to the restructuring charges or the securitization law, or could increase political pressure to rescind or change the securitization law through legislation. This concern is mitigated by the Authority's securitization offset rider, which reduces the Authority's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Restructuring property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from the Authority or its successors or assignees
Service Area:	The Authority's service area covers approximately 1.1 million residential, commercial customers in Nassau and Suffolk counties* and the Rockaway Peninsula

*Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	$475,000,000*
Structure:	Discrete trust
Credit Enhancement:	Mandatory uncapped true-up mechanism; operating reserve account (0.5%); debt service reserve account (1.5%)
Transaction Parties	
Sponsor/Depositor/Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority
Transmission and Distribution System Manager:	PSEG Long Island LLC (unrated)
Trustee:	The Bank of New York Mellon Trust Company, National Association (Aa1/Aa2 stable, a1)**

*Preliminary and subject to change based on market conditions
**The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Overview

The collateral for this pool is the restructuring property, consisting of the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area.

The bonds are also secured by funds on deposit in the collection account, including the debt service reserve subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds with respect to the pledged collateral.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow the Authority to finance the retirement of a portion of its outstanding debt through the issuance of restructuring bonds by the issuer, resulting in savings to the Authority's customers on a net present value basis. The securitization law gives the Authority the right to impose restructuring charges, which is the key asset backing this securitization.

The securitization law, coupled with the adoption of additional financing orders, authorizes the Authority to create additional restructuring property as collateral for the issuance of bonds. The Authority will use this issuance to retire a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds. The current financing order allows for an aggregate amount not to exceed $4.5 billion (inclusive of the previously-issued bonds: $2,022,324,000 in 2013, $1,002,115,100 in 2015 and $636,770,000 in 2016). After the Series 2016B issuance, the issuer has capacity issue an additional $363.8 million of restructuring bonds under the initial authorization.

Similar to other utility cost recovery charge securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that is incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

The Financing Order

On June 26, 2015, the Authority adopted Financing Order No. 4 (the financing order), together with Financing Order No. 2 and Financing Order No. 3; all of which were approved by the New York Public Authorities Control Board on July 15, 2015. On August 14, 2015, the financing orders became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the Series 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, the Series 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property and the Series 2016A restructuring bonds that the issuer issued pursuant to Financing Order No. 3 are secured by the 2016A restructuring property.

The issuer is issuing the bonds pursuant to the financing order, which authorizes: 1) the creation of the restructuring property; 2) the Authority to sell the restructuring property to the issuer under the financing order (the restructuring property is created simultaneous with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the restructuring property from the Authority and pay upfront financing costs; and 6) the Authority to use the proceeds of the sale of the restructuring property to retire a portion of its outstanding debt.

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with the Authority setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of the Authority to review and approve the

issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The State Pledge

The securitization law includes a pledge from the State of New York to the bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order.

Any action of the New York legislature adversely affecting the restructuring charges or the ability to impose, charge or collect the restructuring charges would likely require the State of New York to pay just compensation under the "takings clause" of the United States and State of New York Constitutions.

The state pledge provides protection to bondholders. To the extent the Authority or the State of New York have obligations under the financing order (e.g. to file for true-up adjustments), the securitization law provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

The Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and nonbypassable restructuring charges from all of the Authority's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism. This is designed to ensure the expected collection of amounts sufficient to timely pay the amounts specified above. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from the Authority's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the New York Public Service Commission.

The restructuring charges are nonbypassable; "nonbypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (the Authority's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if the Authority no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

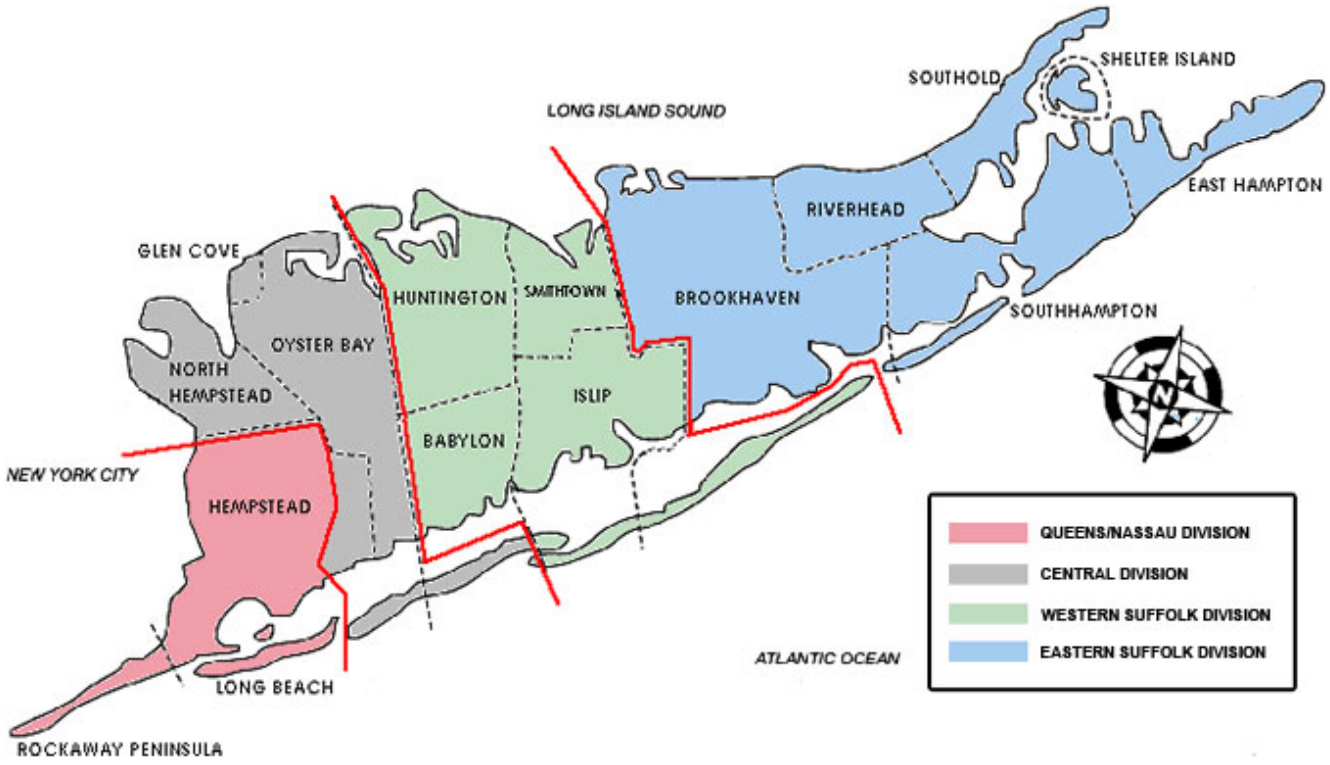
The Service Area

The Authority provides electric T&D services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which the Authority provided electric T&D services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. In 2015, retail electric usage was 54.4% residential, 43.5% commercial, 0.7% street lighting and 1.5% other public authorities. Exhibit 4 below shows the service area.

Exhibit 4
LIPA Service Area



Source: PSEG-LI website

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. Initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. Standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs
3. Mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. Voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

5. More frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. After the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, the Authority, or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

Although LIPA is the named servicer for this securitization, PSEG-LI, a subsidiary of Public Service Enterprise Group Incorporated (PSEG, Baa2 positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting the restructuring charges, meter reading and forecasting electricity usage, among others. PSEG is a publicly traded energy and energy services company. As of December 31, 2015, it had total assets of approximately $37.5 billion, last twelve months revenues of approximately $10.4 billion; and employed approximately 13,000 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company, New Jersey's largest regulated electric and gas T&D utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets.

Billing

PSEG-LI will perform LIPA's duties of billing and collecting the restructuring charges, meter reading and forecasting electricity usage. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

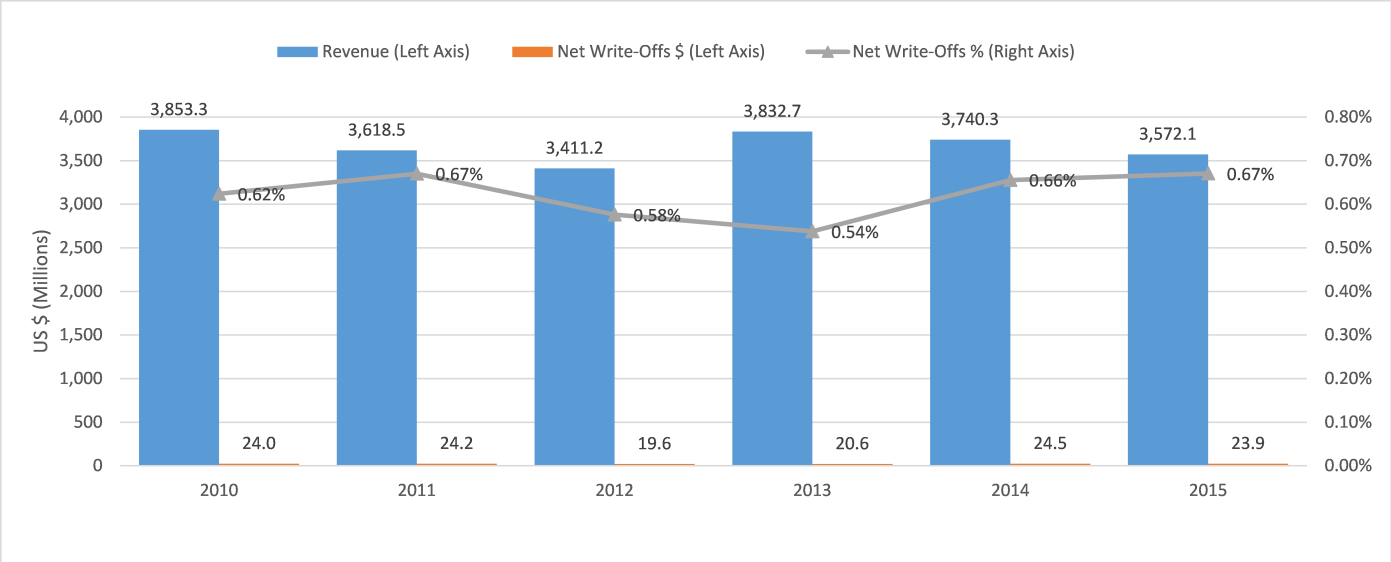
Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor servicer, and any owner of the T&D system assets will take steps to ensure nonbypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor servicer will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Exhibit 5 below shows net write-offs since 2010, which have ranged from a low of 54bps of billed revenue in 2013 to a peak of 67bps in 2011 and 2015.

Exhibit 5

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Exhibit 6 below shows LIPA customer delinquency data since 2010.

Exhibit 6

Average Monthly Delinquencies as a Percentage of Total Billed Revenues

	2010	2011	2012	2013	2014	2015
30-59 days	1.40%	1.46%	1.48%	1.54%	1.34%	1.20%
60-89 days	0.73%	0.80%	0.82%	0.84%	0.67%	0.59%
90+ days	2.43%	2.82%	3.42%	3.54%	2.31%	2.46%
Total	4.56%	5.08%	5.72%	5.93%	4.31%	4.25%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Analysis

Legal Analysis

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

New York does not have a referendum or initiative process by which the securitization law may be challenged. Therefore, the only way for the securitization law to be changed would be through a legislative action which would be subject to the state pledge.

Bondholders (or the trustee acting on their behalf) could challenge under the Contract Clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would likely be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The financing order provides that the restructuring property may be pledged to secure the payment of the bonds, financing costs, and other amounts owed. The securitization law provides that a valid and enforceable security interest in the restructuring propery will attach and be perfected at the time the pledge is made. The lien and security interest attach without any physical delivery of collateral or other act. The securitization law provides that the pledge is continuously perfected and has priority over any other lien created by the operation of law or otherwise that may be created subsequently.

Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, more than 20 colleges and universities and core research institutions.

Long Island's median household income is substantially above that of New York State and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $99,035 and $86,266, respectively, considerably higher than the $58,878 for New York State and the $54,562 for the US. According to the Authority, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 7 below shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 7
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	51.5%	52.8%	52.2%	52.4%	53.2%	53.2%	54.1%	53.8%	54.2%	54.4%	53.4%	54.4%
Commercial	46.6%	45.1%	45.7%	45.4%	44.5%	44.5%	43.8%	43.9%	43.7%	44.6%	44.0%	43.5%
Street Lighting	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	1.1%	0.7%
Other Public Authorities	1.1%	1.4%	1.3%	1.4%	1.5%	1.5%	1.3%	1.5%	1.4%	0.3%	1.5%	1.5%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

For the twelve months ending on June 30, 2016, the ten largest retail electric customers represented approximately 5.7% of the Authority's retail kilowatt-hour sales resulting in 4.8% of revenues. As of the closing date, no customer or group of related commercial is exempt from paying the restructuring charges. Exhibit 8 below shows the energy usage and revenue from the top 10 commercial customers.

Exhibit 8
Top 10 LIPA Commercial Customers

	Industry	Energy Usage (GWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	State Public Transportation	303.8	1.52%	$45,428,220	1.32%
2	Telecommunications	145.7	0.73%	$22,870,878	0.67%
3	Nas/Suf County Govt Twnsps	132.6	0.67%	$20,800,037	0.61%
4	Water Districts	122.7	0.62%	$20,598,940	0.60%
5	Health Services-Hospitals	120.0	0.60%	$17,580,632	0.51%
6	Retail Food	102.6	0.51%	$16,725,102	0.49%
7	Real Estate/Developers	66.9	0.34%	$5,284,931	0.15%
8	Nassau Universities	51.0	0.26%	$7,354,337	0.21%
9	Manufacturing	43.7	0.22%	$4,489,759	0.13%
10	Retail Non-Food	36.4	0.18%	$3,726,650	0.11%
	Total	**1,125**	**5.65%**	**164,859,486**	**4.81%**

Source: Utility Debt Securitization Authority

Remote Risk of Severe Ratepayer Base Declines

The Series 2016B bonds are exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's stable ratepayer base. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Customers that self-generate will only be responsible for paying restructuring charges based upon their net-billed consumption. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The restructuring charge will be recoverable from all customers taking T&D service. As of July 29, 2013, the securitization law defines the service area to include two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. Thus, the service area is fixed by the legislation. If the service area expands in the future, the new customers would be subject to the restructuring charge on a going-forward basis.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges. Moreover, municipalization would not affect restructuring charge collections since a successor and its customers will be subject to the restructuring charges, even if the T&D system assets are no longer owned by the Authority. Since 1998, no municipalizations have occurred in the service area.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact the Authority's operations, temporarily interrupting transmission, distribution and consumption of electricity, hence reducing the collections of restructuring charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the Authority's service area, which could cause the per-kWh restructuring charge to be greater than expected.

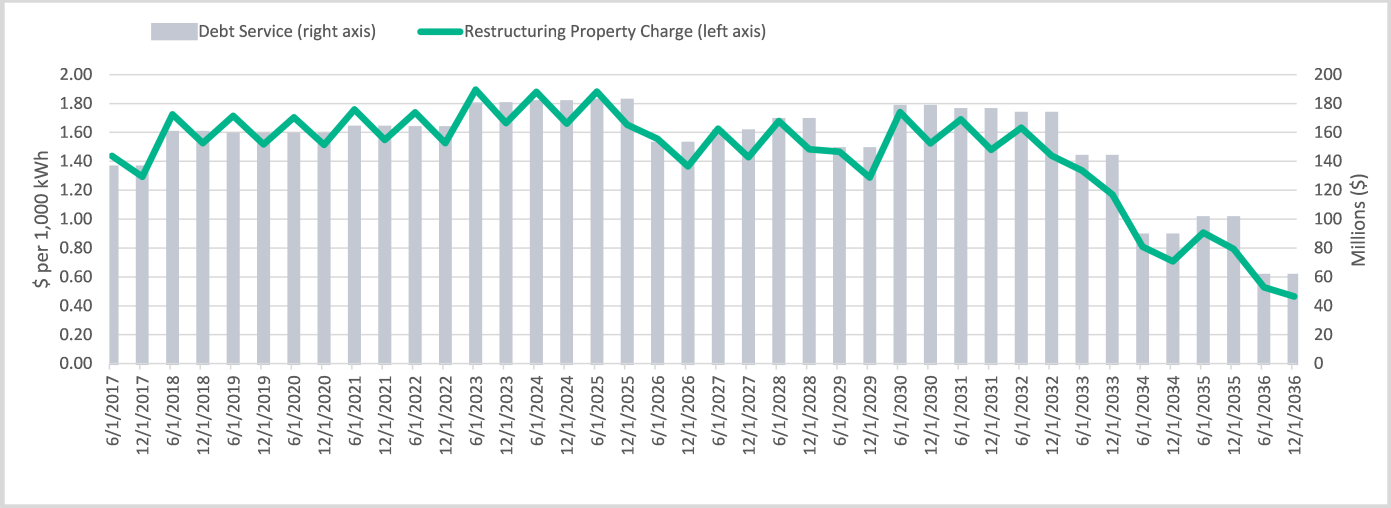
Forecasting Electricity Consumption

The Authority's internal company forecasts are used for projections of electricity price and weather conditions. The forecast incorporates customer usage, delinquencies and write-offs, among other inputs.

The Authority assesses the restructuring charges based on its forecasts of customer usage. The amount and the rate of restructuring charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs.

Exhibit 9 below shows the forecasted restructuring charge per 1,000 kWh and scheduled debt service payments.

Exhibit 9
Restructuring Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: Utility Debt Securitization Authority; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Additionally, there may be insufficient funds if the servicer inaccurately forecasts electricity consumption or uses inaccurate customer delinquency or charge-off data when setting or adjusting the 2016B restructuring charges. We view this risk as remote, as the maximum forecast variance since 2011 has been less than 6% per customer category, as shown in Exhibit 10.

Exhibit 10
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	4.31%	-2.37%	-2.69%	-4.28%	0.51%
Commercial	-1.00%	-3.59%	-2.39%	-1.70%	-2.07%
Street Lighting	0.17%	-2.19%	-4.44%	1.71%	-3.81%
Other Government	5.49%	-13.64%	-4.20%	3.13%	2.49%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm that the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the restructuring charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the restructuring charge, both in absolute terms and as a percentage of the customer's energy bill. In our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the restructuring charge is as high as 22.74%, higher than most other utility cost recovery charge securitizations. This concern is mitigated by the Authority's securitization offset rider, which reduces the delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

The Authority expects the combined initial restructuring charge for the 2013, 2015, 2016A and 2016B transactions to be around 7.8% of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 15, 2017, which is higher than most other utility cost recovery charge securitizations we rate. The 7.8% is preliminary and subject to change based on market conditions.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the Authority's projections
2. Implied net charge-offs of 0.62%
3. Collection curve projects 20.0% of collections within 30 days and 80.0% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains LIPA or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case

4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year

5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case

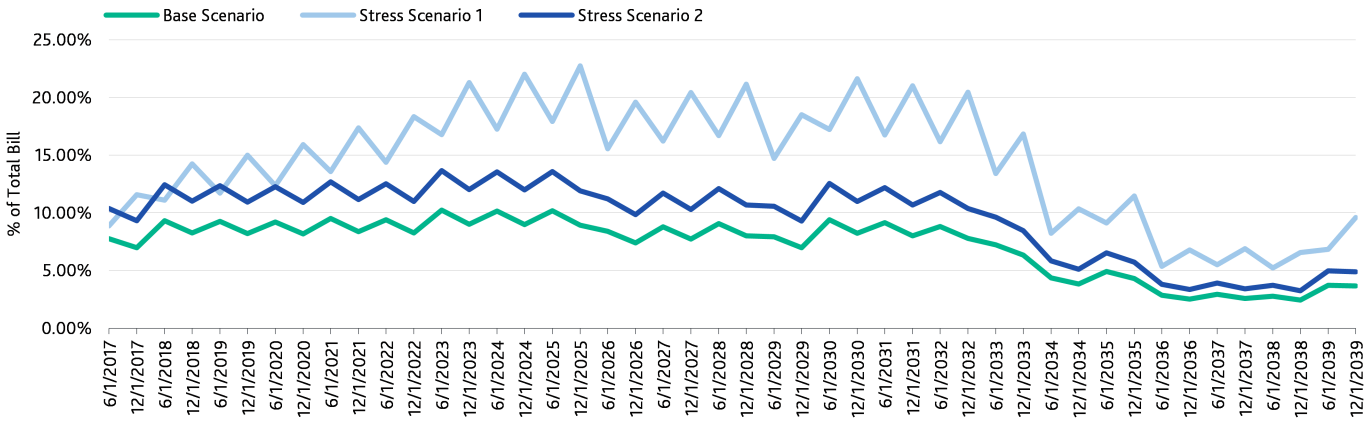
3. Collection curve is the same as in base case

4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 11 shows the projected restructuring charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 12 shows the projected restructuring charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 11

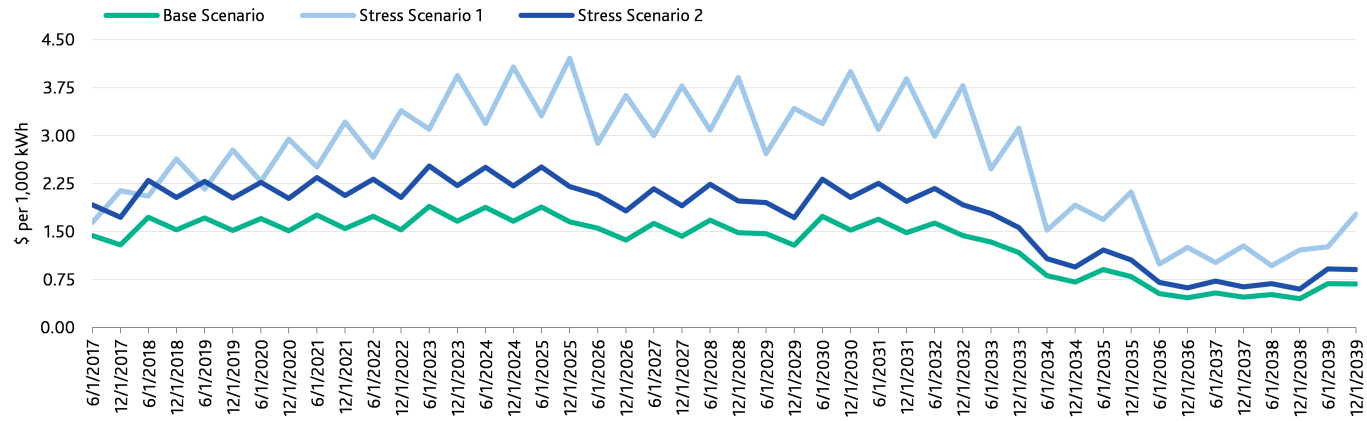
Projected Restructuring Charge as a Percentage of a Customer's Total Bill



Source: Utility Debt Securitization Authority; Moody's calculations

Exhibit 12

Projected Restructuring Charge ($ per 1,000 kWh)



Source: Utility Debt Securitization Authority; Moody's calculations

Comparables

As shown in Exhibit 13, stress scenario 1 is more stressful and results in a peak restructuring charge equal to about 22.74% of a 1,000 kWh per month customer's bill. This is high compared to other utility cost recovery deals.

Exhibit 13

Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
UDSA 2016B	10.25%	22.74%	13.66%
UDSA 2016A	7.21%	16.04%	10.40%
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

On the closing date, the Authority will sell the restructuring property to the issuer pursuant to a sale agreement between the issuer and the Authority. LIPA will be the servicer of the restructuring property. PSEG-LI will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others.

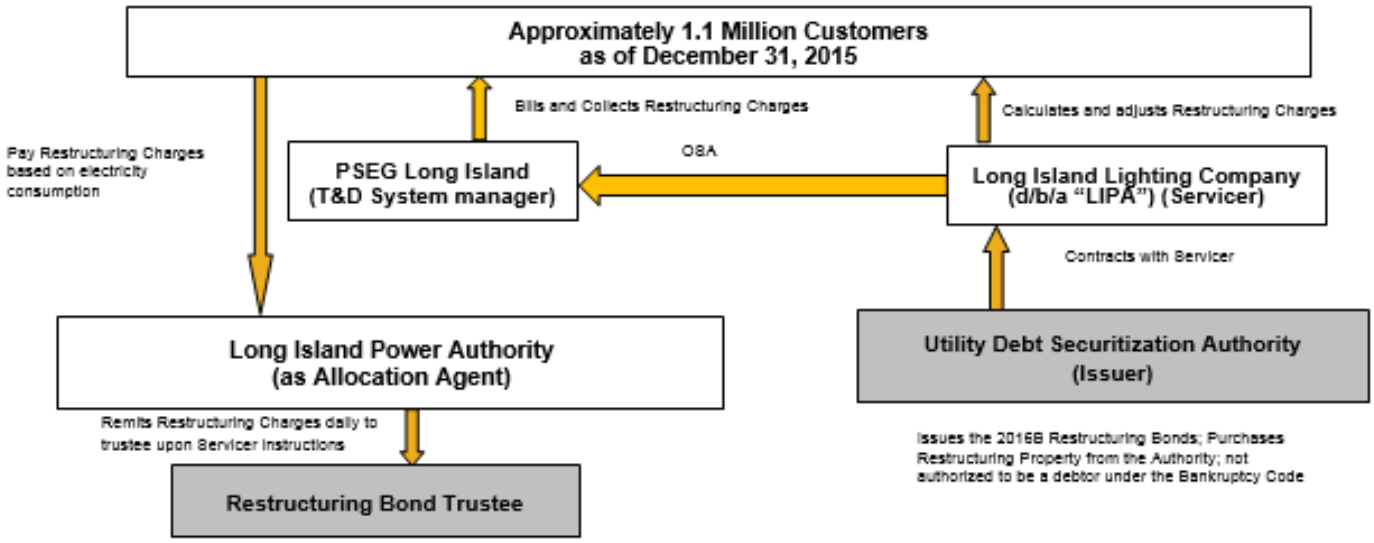
Securitization Structure Description

Structural Diagram

Exhibit 14 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 14

Structural Diagram



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

1. The issuer purchases the restructuring property from the Authority and issues the Series 2016B bonds
2. The issuer contracts with LIPA as servicer to calculate and adjust the restructuring charges
3. LIPA contracts with PSEG-LI to bill and collect the restructuring charges

4. Electric utility customers pay restructuring charge on electricity bills based on electricity consumption
5. The Authority, as allocation agent, remits the restructuring charges to the trustee on a daily basis

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the debt service reserve account. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Operating Reserve Account

On or before the date of issuance of the bonds, the Authority will deliver to the trustee for deposit into the operating reserve account an amount not less than 0.50% of the initial aggregate principal amount of the Series 2016B bonds. Amounts may be withdrawn from the account to pay scheduled principal on the Series 2016B bonds, provided however that an amount not less than 0.50% remains on deposit in the account.

Debt Service Reserve Account

On or before the date of issuance of the bonds, the issuer will make a capital contribution to the trustee in an amount not less than 1.5% of the aggregate outstanding principal amount of the bonds, which will be deposited in the debt service reserve account. Under the financing order, any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the subaccount and applied to subsequent payments.

Cash Commingling

The servicer is entitled to commingle the restructuring charges that it receives with its own funds until it remits the funds to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from restructuring charges with other funds.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the allocation account within two business days. Any discrepancy between estimated and actual collections is mitigated by the true-up mechanism, which allows the Authority to adjust the restructuring charges at any time as needed to make timely interest and principal payments on the bonds.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other operating expenses to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;
6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;

7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

LIPA will calculate the annual true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment. Should LIPA perform a mid-year true-up adjustment, LIPA will similarly calculate the mid-year true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next mid-year true-up adjustment.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period);
5. commencement of an involuntary bankruptcy or similar proceeding against the issuer which remains in effect for 90 days;
6. commencement of a voluntary bankruptcy or similar proceeding by the issuer; or
7. an action violating the financing order or state pledge.

Issuance of Additional Bonds

The issuer can issue up to $4.5 billion in restructuring bonds over four distinct financing orders. To the extent the amount authorized is not issued under this fourth and final financing order, additional financings may be authorized by new financing orders to be adopted at a later date. Each series of restructuring bonds that may be issued will be backed by separate restructuring property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of restructuring bonds. However, the issuer may not issue additional restructuring bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of restructuring property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the restructuring property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under Chapter 9 or any other provision of the Bankruptcy Code.

The issuer was formed solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.

The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from the Authority and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.

Sponsor and Seller

The Long Island Power Authority will be the securitization's sponsor and the seller of the restructuring property. The Authority is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a Chapter 9 debtor pursuant to its enabling legislation.

The Authority took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of the Authority through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

The Authority is governed by a Board of Trustees and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. The Authority is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

The Authority and LIPA are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LIPA conducts the electric business in the service area and is responsible for providing service to customers in the service area. The Authority and LIPA are also parties to an administrative services agreement pursuant to which the Authority provides personnel, personnel-related services and other services necessary for LIPA to provide electric service in the service area.

Administrator

LIPA will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. LIPA, as administrator, will be entitled to receive an annual administration fee of $100,000 payable annually, in arrears.

Securitization Structure Analysis

The key structural feature of this transaction is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage.

In this transaction, the strong true-up mechanism combined with nonbypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds. The operating reserve and debt service accounts provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of LIPA (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

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REPORT NUMBER 1033393

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CREDIT OPINION
16 June 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Duke Energy Florida Project Finance, LLC Series A Bonds

First Duke Energy Florida-Sponsored Utility Cost Recovery Bond

Capital Structure

Exhibit 1
Provisional (P) Ratings

Series	Provisional Rating	Expected Amount	Coupon	Legal Final Maturity Date
Series A 2018	(P)Aaa (sf)	$183,000,000	Fixed	3/1/2022
Series A 2021	(P)Aaa (sf)	$150,000,000	Fixed	9/1/2024
Series A 2026	(P)Aaa (sf)	$436,000,000	Fixed	9/1/2031
Series A 2032	(P)Aaa (sf)	$250,000,000	Fixed	3/1/2035
Series A 2035	(P)Aaa (sf)	$275,290,000	Fixed	9/1/2038
Total		$1,294,290,000		

The ratings address the expected loss posed to investors by the legal final maturity. In Moody's opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.
Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Summary Rating Rationale

We have assigned provisional ratings to the five classes of bonds (Series A bonds, or the bonds) that Duke Energy Florida Project Finance, LLC (the issuer) will issue. The issuer is wholly-owned by Duke Energy Florida, LLC (DEF; A3 Stable), a subsidiary of Duke Energy Corporation (Baa1 negative), one of the largest utility holding companies in the US. DEF formed the issuer to securitize a special charge on DEF customers' utility bills. The charge is imposed to recover certain costs associated with DEF's retirement of its Crystal River Unit 3 (CR3) nuclear power plant, including certain capitalized costs of the retired nuclear generating asset and ancillary costs and fees, as well as financing costs associated with this issuance. The Series A bonds will be the first utility cost recovery bonds sponsored by DEF.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 15 June 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

As a regulated utility, DEF is typically entitled to recover specified costs of acquiring, constructing and improving energy generating assets which are generally capitalized and recovered over the useful life of that asset. The Florida Public Service Commission (FPSC) has authorized DEF to recover a specified portion of DEF's remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the CR3 nuclear plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges (nuclear asset-recovery property) is the primary collateral backing the Series A bonds.

Our provisional ratings reflect our assessment of the legal and structural aspects of the transaction including the State of Florida's legislation, financing order and state pledge, the mandatory uncapped true-up mechanism, the relatively low level of the recovery charge as compared to prior rated utility cost recovery transactions, the large and diversified ratepayer base, and the credit quality of the servicer.

Credit Strengths

Strength of Legislation and Financing Order: The State of Florida's legislation (Section 366.95, Florida Statutes, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on December 19, 2015 permits the securitization and strongly protects the nuclear asset-recovery property securing the bonds. Similar to other utility cost recovery securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of Florida pledges to bondholders that it will not (1) alter provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of the nuclear asset-recovery property, or (3) except as authorized by the true-up adjustment mechanism, reduce, alter or impair nuclear asset-recovery charges until the bonds have been repaid in full (the state pledge). In addition, the securitization law and financing order contain the typical strong true-sale and security interest provisions.

FPSC's irrevocable financing order authorizes DEF to recover specified costs of retiring the CR3 nuclear plant by collecting nuclear asset-recovery charges. This nuclear asset-recovery property grants the issuer the right to impose, bill and collect, nonbypassable nuclear asset-recovery charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. In this context, nonbypassable refers to the requirement that the charges be levied on all of DEF's existing and future retail electric customers receiving transmission and distribution services in DEF's service area, including customers of any DEF successor or assignee, and even if a customer elects to purchase electricity from an alternative electric supplier following a deregulation of public utilities in Florida.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts nuclear-asset recovery charges semiannually (and quarterly after the last scheduled maturity date of the bonds of any series) to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time if the servicer deems necessary to ensure timely bond payments.

Relatively Low Recovery Charge: DEF expects the securitization's initial nuclear asset-recovery charge to represent around 2.5% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in DEF's service area will receive as of April 2016; this percentage charge is relatively low compared to charges in other utility cost recovery transactions. For context, the three most recent utility cost recovery bond issuances we rated, Utility Debt Securitization Authority, sponsored by LIPA, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 6.9%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in DEF's service area is a credit strength. The service area includes the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas. The service area primarily

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

includes a mix of residential customers (59% by revenue) and commercial customers (28% by revenue). Unlike most other utility cost recovery securitizations, the service area includes very few industrial customers (6% by revenue), which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Strength and Experience of the Servicer: We rate DEF A3 with a stable outlook. DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

Credit Challenges

Challenges to Securitization Law and Financing Order: Potential state and federal legislative and regulatory actions could weaken the legal protections of the nuclear asset-recovery property; however we view this risk as remote. Florida does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for FPSC to amend or revoke the financing order, would be through an amendment to the state constitution or a legislative action, either of which would violate the state pledge. The risk that the State of Florida would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

The people of the State of Florida have the right to amend the Florida Constitution through initiative powers. It is possible that the people of Florida, using their initiative powers, might amend or repeal the Florida Constitution in a manner affecting the securitization law. The process to propose a revision or amendment to the Florida Constitution by initiative is extremely burdensome. DEF is currently unaware of any efforts to amend the Florida Constitution in a manner which would affect the securitization law in any way.

On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (Section 366.93, Florida Statutes) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

We view the risk to bondholders from this litigation as remote. Several past challenges to securitization laws such as this have been unsuccessful, and even in the low likelihood event that this challenge is successful, the arguments put forward by the plaintiffs are generally not relevant to the securitization law.

Potential for Insufficient Collections: Collections arising from the nuclear asset-recovery property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. DEF's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur semiannually and on an interim basis as needed.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Nuclear asset-recovery property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from DEF or its successors or assignees
Service Area:	DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Series A Senior Secured Bonds
Amount:	$1,294,290,000
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Capital Subaccount
Transaction Parties	
Sponsor/Depositor/Servicer:	Duke Energy Florida, LLC
Issuer:	Duke Energy Florida Project Finance, LLC
FPSC Financial Advisor:	Saber Partners, LLC
Trustee:	The Bank of New York Mellon Trust Company, National Association

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Assets Overview

In February 2013, DEF announced it would close and decommission the CR3 nuclear power plant. The FPSC has authorized DEF to recover a portion of its remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges is the primary collateral (nuclear asset-recovery property) backing the Series A bonds.

The bonds are also secured by funds on deposit in the collection account, including the general subaccount, the capital subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds in respect to the pledged collateral.

Assets Description

The Securitization Law

In 2015, the Florida legislature enacted the securitization law, codified as Section 366.95, Florida Statutes. The securitization law allows electric utilities to access lower-cost funds through nuclear asset-recovery bonds pursuant to financing orders issued by the FPSC. One purpose of the securitization law is to lower the cost to customers associated with the long-term financing of costs incurred in connection with the early retirement or abandonment of a nuclear generating asset unit. The early retirement or abandonment must be deemed reasonable and prudent by the FPSC through a final order approving a settlement or other final order issued by the FPSC before July 1, 2017, and the pretax costs to be financed must exceed $750 million.

The securitization law permits DEF to impose irrevocable, binding, nonbypassable nuclear asset-recovery charges on all future and existing customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts sufficient to pay principal of and interest on the bonds and other administrative expenses of the offering. The FPSC governs the amount and terms for collections of these nuclear asset-recovery charges through one or more financing orders issued to DEF. Upon the issuance of the bonds these nuclear asset-recovery charges may not be reduced, impaired, postponed, terminated or otherwise adjusted by the FPSC except as adjusted pursuant to the true-up mechanism.

Florida and other states have passed legislation similar to the securitization law 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.

The securitization law provides that a valid and enforceable security interest in nuclear asset-recovery property will attach only upon the later of: the issuance of a financing order, the execution and delivery of a security agreement with the indenture trustee in connection with issuance of a series of bonds, and the receipt of value for such bonds. Although not governed by the UCC, upon filing notice with the Florida UCC registry the lien and security interest will be continuously perfected. The security interest will have priority in the order of filing and take precedence over any subsequent judicial or other lien creditor. No continuation statements are necessary to maintain such perfection. The servicer pledges in the servicing agreement to file in the Florida UCC registry on or before the closing date and the seller will represent that no prior filing has been made.

The Financing Order

The FPSC issued an irrevocable financing order to DEF on November 19, 2015. That financing order became final and non-appealable on December 19, 2015. Pursuant to the financing order, DEF established the issuer to be a bankruptcy-remote special purpose subsidiary to issue the nuclear asset-recovery bonds. In the financing order, the FPSC authorized the imposition and collection of nuclear asset-recovery charges on all DEF transmission and distribution customers. DEF, as initial servicer, will collect nuclear asset-recovery charges on the issuer's behalf and will remit the nuclear asset-recovery charges to the indenture trustee.

The FPSC expects the financing order to result in a substantial cost savings to ratepayers of $708 million or $1.95 per month for 1,000 kWh, versus the traditional method of cost recovery under current and expected market conditions. The financing order has been praised publicly by regulators and consumer advocacy groups, further insulating the financing order from challenge.

The State Pledge

The securitization law includes a pledge from the State of Florida to the bondholders that it will not (1) alter the provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of nuclear asset-recovery property; or (3) except as authorized by the true-up adjustment mechanism, reduce, alter, or impair the nuclear asset-recovery charges until the bonds have been repaid in full.

Any action of the Florida legislature adversely affecting the nuclear asset-recovery charges or the ability to charge or collect the charges would likely require the State of Florida to pay just compensation under the "takings clause" of the US and Florida Constitutions. The seller agrees that it will institute any action or proceeding necessary to compel performance by the FPSC, the State of Florida or any of their respective agents of any of their obligations or duties under the securitization law or any financing order.

The Nuclear Asset-Recovery Charges

The nuclear asset-recovery charges are nonbypassable, consumption-based charges separate and apart from DEF's base rates; the nuclear asset-recovery charges are to be paid by all existing and future customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts. Such customers must pay nuclear asset-recovery charges even if DEF goes out of business and its transmission and distribution services are taken over by another utility or if a customer elects to purchase electricity from an alternative electric supplier following a fundamental change in regulation of public utilities in Florida. No customer receiving transmission or distribution service from DEF can avoid the charge. The only way to avoid the charge is to disconnect from DEF's electric grid.

The nuclear asset-recovery charges are permitted to continue for 276 months from issuance, or until the bonds are paid in full. The expected scheduled final payment date for the Series A 2033 bonds is 240 months from issuance, providing up to an additional 36 months of nuclear asset-recovery charges if necessary to pay the bonds.

The Nuclear Asset-Recovery Costs

The nuclear asset-recovery charges authorized by the financing order allow DEF to recover nuclear asset-recovery costs related to retiring the CR3 nuclear plant located in Citrus County, Florida. CR3 was originally placed in service in 1977. In February 2013, DEF announced the early retirement of the project. DEF's unrecovered net investment in the project was approximately $1.6 billion. In October 2013, the FPSC approved a settlement agreement whereby DEF agreed to write-off approximately $300 million of its unrecovered net investment in CR3. The settlement agreement allowed DEF to recover its remaining unrecovered net investment in the project of approximately $1.3 billion over a 240 month period beginning no later than the first billing period of January 2017.

The nuclear asset-recovery costs financed by the bonds are equal to (i) the balance of the CR3 regulatory asset as of December 31, 2015 as allowed under the financing order minus (ii) $35,894,547, which, pursuant to the FPSC's Final Order PSC-16-0138-FOF-EI issued on April 5, 2016, shall not be included as part of the CR3 regulatory asset, plus (iii) carrying charges accruing at 6.0% per annum on the balance of the CR3 regulatory asset (adjusted as described in (ii) above) from December 31, 2015 through June 21, 2016.

Excluded from the amount being financed is $35,894,547 of costs claimed pursuant to Section 366.93, Florida Statutes. On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (366.93) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

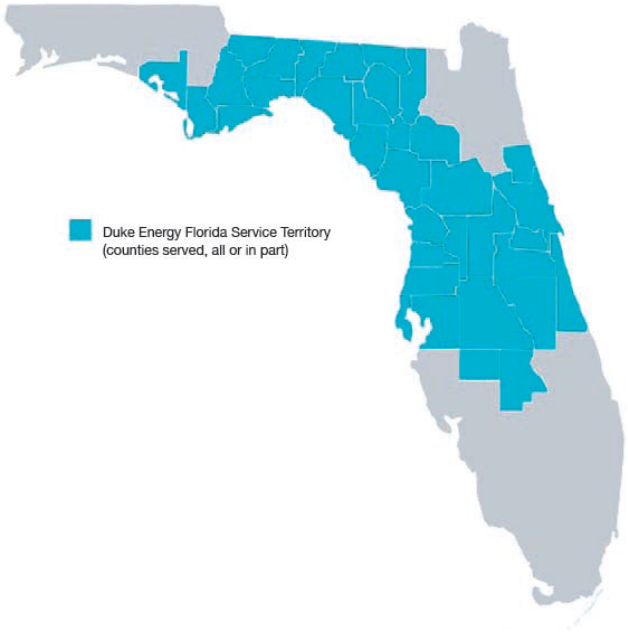
The suit claims DEF unlawfully charged customer higher rates to cover more than $1.2 billion in expenses at its Crystal River nuclear power plant and at its proposed (and now shelved) Levy County nuclear plant site. In addition to the suit seeking relief for nuclear recovery costs, it also seeks to nullify as unconstitutional the nuclear cost recovery system and all nuclear cost recovery orders issued by the FPSC, and it seeks an order enjoining defendants from further unlawful charges. The likelihood of the lawsuit prevailing is low considering other lawsuits challenging the constitutionality of Florida's nuclear cost recovery statute have been found to be without merit and rejected by Florida courts.

The Service Area

DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers. During the twelve

months ended December 31, 2015, DEF billed approximately 38.6 billion kilowatt hours of electricity to its covered electric customers in Florida, resulting in revenues of approximately $4.4 billion. Exhibit 4 below shows a map of DEF's service area.

Exhibit 4
Duke Energy Florida Service Area



Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Statutory Uncapped True-Up Adjustment Mechanism

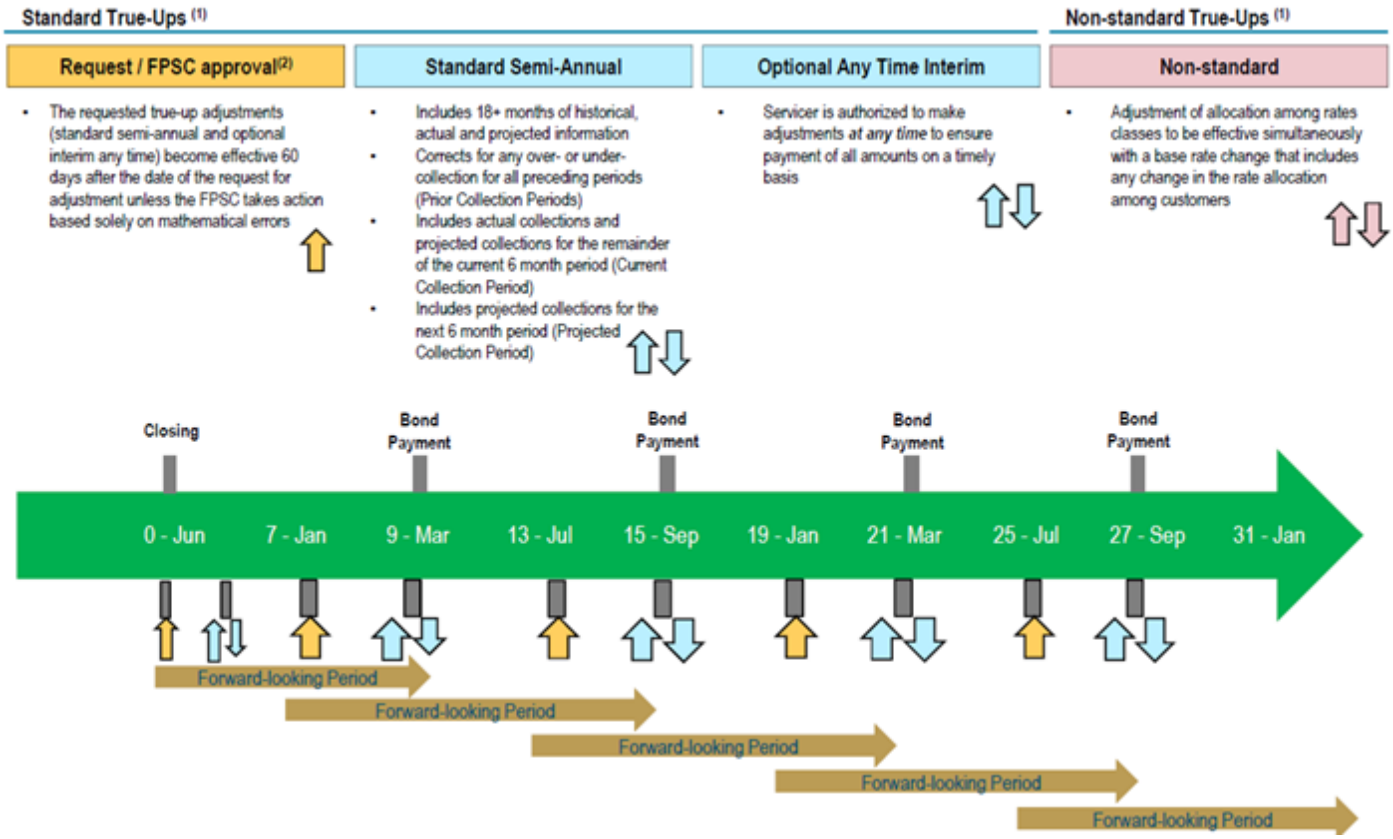
The securitization law and the financing order require that the issuer or DEF file with the FPSC at least semi-annually (and quarterly after the scheduled final payment date for the latest maturing bond) a letter applying the true-up mechanism to correct for any overcollection or undercollection of the nuclear asset-recovery charges and make any adjustments to ensure the recovery of revenues sufficient to provide for the timely payment of scheduled principal and interest on the bonds and other required amounts and charges. The FPSC's review of any adjustment request is limited solely to determining whether there is any mathematical error in the application of the formula-based mechanism.

Under the servicing agreement, the servicer will make adjustments to the nuclear asset-recovery charges at least semi-annually. In addition to the semi-annual true-up adjustment, the servicer is authorized to make interim adjustments at any time for any reason to ensure the timely payment on the bonds. In addition, the servicer will make a non-standard true-up adjustment to be effective simultaneously with a base rate change that includes any change in the rate allocation among customers used to determine the nuclear asset-recovery charges. Exhibit 5 below illustrates the true-up mechanism.

Under the irrevocable financing order, the FPSC guarantees it will act, as directed by the securitization law, to implement the true-up mechanism for making any adjustments that are necessary to correct for any overcollection or undercollection of the nuclear asset-recovery charges or to otherwise ensure the timely payment of principal of and interest on the bonds when due.

Exhibit 5

True-Up Mechanism



Source: DEF

Servicing

DEF will be the initial servicer of the bonds. DEF, as servicer, will be responsible for, among other things, calculating, billing, collecting and posting the nuclear asset-recovery charges from customers, submitting requests to the FPSC to adjust these charges, monitoring the collateral for the bonds and taking certain actions in the event of non-payment by a customer. The indenture trustee's receipt of collections in respect of the nuclear asset-recovery charges, which will be used to make payments on bonds, will depend in part on the skill and diligence of the servicer in performing these functions.

DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

DEF will be entitled to receive an annual servicing fee in an amount equal to 0.05% of the aggregate initial principal amount of the bonds. This servicing fee will be payable in equal installments on each semi-annual payment date, in arrears. If DEF or any of its affiliates is not the servicer, the successor servicing fee may be up to 0.60% of the initial principal amount of the bonds unless a higher fee is approved by the FPSC.

In the event of a servicer default, the indenture trustee, at the direction of a majority of bondholders or at the direction of the FPSC, may terminate the rights and obligations of the servicer under the servicing agreement. However, replacement of the servicer would require the agreement of the indenture trustee and the administrative agents under DEF's accounts receivable sale programs.

Credit, Billing and Budget Billing

DEF is required to provide transmission and distribution service to all qualified customers. First time customers establishing residential electric accounts are generally required to pay a deposit as are customers that do not satisfy threshold credit score requirements.

The amount of the deposit reflects the estimated use over a two-month period, which is the maximum DEF may collect by law. As a general rule, non-residential accounts require deposit coverage. Consumer credit is not used to determine credit worthiness on non-residential accounts.

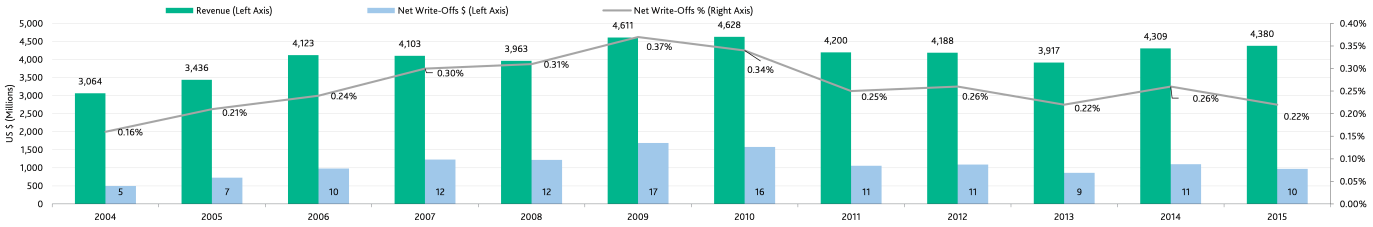
DEF bills its customers once every 24 to 39 days and distributes approximately 85,000 bills on each business day to its customers. Approximately 6% of DEF's residential customers choose to be billed using DEF's budget billing program. For these customers, DEF determines and bills a monthly budget based on the last twelve months of billing history for each account. Budget billing does not affect the amount of nuclear asset-recovery charges that the servicer remits to the indenture trustee on a daily basis.

Bills are due 21 calendar days after the issue date at which time they are considered delinquent. For the year ended December 31, 2015, approximately 6% of total billed retail revenue became eligible for disconnect and 1% was disconnected. Approximately 87% of accounts disconnected for nonpayment ultimately make full payment and have service restored. Unpaid final bills are written off approximately 30 days after the final bill is issued.

Exhibit 6 below shows net write-offs since 2004, which have ranged from a low of 16bps of billed revenue in 2004 to a crisis period peak of 37bps in 2009. DEF's forecast is 26 bps, consistent with the post-crisis performance history.

Exhibit 6

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: DEF

While more than 7.5% of customers are typically 30-59 days past due, by the third month most delinquencies are cured, with those still outstanding past 90 days well under 1% throughout the observation period. Exhibit 7 shows DEF customer delinquency data since 2005.

Exhibit 7

Delinquencies as a Percentage of Total Billed Revenues

	As of 2005	As of 2006	As of 2007	As of 2008	As of 2009	As of 2010	As of 2011	As of 2012	As of 2013	As of 2014	As of 2015
30-59 days	8.27%	8.51%	9.66%	8.41%	9.38%	7.82%	7.79%	7.59%	7.48%	7.79%	7.73%
60-89 days	0.92%	0.87%	1.12%	1.07%	0.78%	0.59%	0.57%	0.54%	0.59%	0.64%	0.57%
90+ days	0.52%	0.56%	0.90%	0.66%	0.51%	0.33%	0.22%	0.21%	0.28%	0.33%	0.33%
Total	9.71%	9.94%	11.68%	10.14%	10.67%	8.75%	8.58%	8.34%	8.35%	8.76%	8.63%

Source: DEF

Assets Analysis

Strong Service Area

This transaction benefits from the size and diversity of the ratepayer base within DEF's service area and the projected population growth and economic stability of the ratepayer base. During 2015, approximately 9% of DEF's total retail billed electric consumption was by industrial customers, approximately 31% was by commercial customers and approximately 52% was by residential customers, with other entities comprising approximately 8%. Exhibit 8 shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 8
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	57.91%	57.70%	56.85%	57.21%	56.94%	57.34%	59.72%	58.18%	56.96%	58.49%	58.85%	59.43%
Commercial	27.66%	27.57%	27.89%	28.06%	28.39%	28.46%	27.01%	28.10%	28.85%	28.11%	27.81%	27.51%
Industrial	7.65%	7.73%	7.98%	7.34%	7.31%	6.70%	6.14%	6.40%	6.53%	6.12%	6.10%	5.91%
Streetlighting	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%	0.04%	0.05%	0.04%	0.04%	0.04%
Public Authority	6.73%	6.95%	7.22%	7.34%	7.31%	7.44%	7.09%	7.28%	7.61%	7.24%	7.20%	7.11%

Source: DEF

For the year ended December 31, 2015, the ten largest retail electric customers represented approximately 8.3% of DEF's retail kilowatt-hour sales. There are no material concentrations in the residential class. As of the closing date, no customer or group of related commercial or industrial customers will be obligated to pay more than 10% of the nuclear asset-recovery charges.

Exhibit 9
Top 10 DEF Customers

	Industry	Energy Usage (MWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	Mining/Chemical Processing	691,591	1.79%	$46,289	1.06%
2	Education	456,852	1.18%	$37,972	0.87%
3	Retail Grocery	393,738	1.02%	$35,619	0.81%
4	Mining/Chemical Processing	340,470	0.88%	$23,343	0.53%
5	Education	252,072	0.65%	$27,720	0.63%
6	Retail Trade	250,016	0.65%	$24,409	0.56%
7	Stone/Clay/Glass	236,193	0.61%	$15,771	0.36%
8	Education	201,586	0.52%	$23,188	0.53%
9	Retail Grocery	199,997	0.52%	$19,744	0.45%
10	Government	175,246	0.45%	$16,124	0.37%
	Total	3,197,761	8.29%	$270,179	6.17%

Source: DEF

Remote Risk of Severe Ratepayer Base Declines

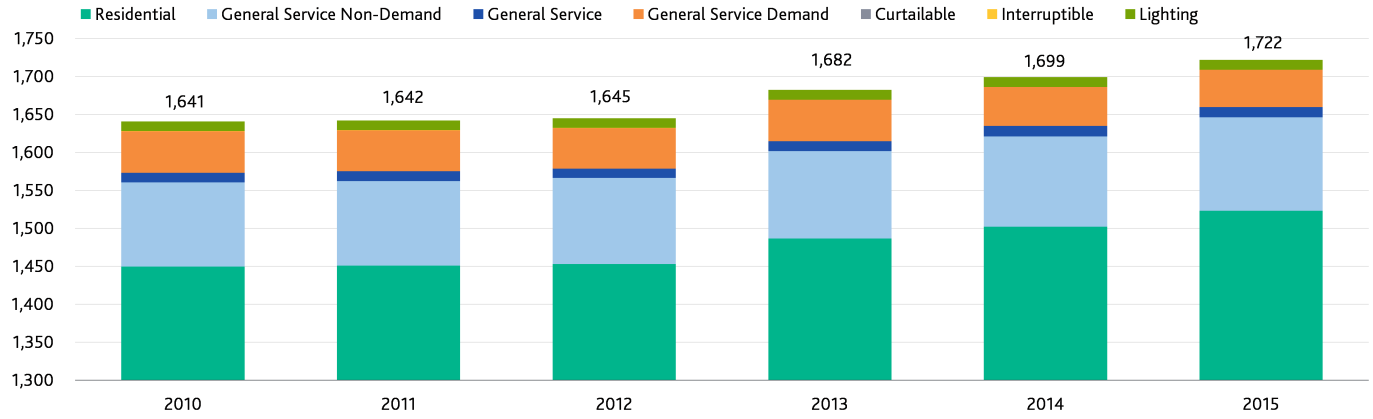
The ratepayer base is sensitive to many macroeconomic factors, including service area population and household formation growth, expected disconnects due to use of self-generation, changes in the service area and potential municipalizations. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Population Growth

Florida's robust population trend is a benefit to the transaction. According to the Census Bureau, the state's population grew an average of 1,000 residents per day in 2015. This 1.8% increase was the largest since 2006 and the strongest in the South. Despite the rapid rise, population growth will likely accelerate further because the pace remains historically weak. In the 50 years before the Great Recession, annual population growth in the state exceeded last year's pace by 47 times. Florida should also expect faster expansion because its cities appeal to Hispanics—the nation's fastest growing ethnic group—and retiring baby boomers— the fastest-growing age

group in the U.S. In 2015, for the third consecutive year, The Villages, Central Florida's retiree haven, was the nation's fastest growing metro area in population. Exhibit 10 shows that growth in the average number of DEF retail electric customers since 2010.

Exhibit 10
Average Number of Retail Electric Customers



Source: DEF

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of nuclear asset-recovery charges on other non-self-generating ratepayers. Based on existing legislation precluding the use of third-party owned solar equipment, DEF expects the estimated cost of self-generation for customers, combined with the practical obstacles to installing on-site generation, to limit self-generation from being installed by any meaningful number of customers within the service area. DEF forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The nuclear asset-recovery charge will be recoverable from all DEF customers taking transmission or distribution service from DEF. Thus, if the service area expands in the future, the new DEF customers would be subject to the nuclear asset-recovery charge on a going-forward basis. Pursuant to the financing order, any successor to DEF is required to perform all obligations and have the same rights under the financing order as DEF, including the collection of the nuclear asset-recovery charges from customers and payment of appropriate amounts to the issuer.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges and the likelihood that even after a municipalization, DEF's transmission and distribution services will continue to be used. While multiple municipal utilities exist in Florida, DEF is unaware of any municipality that has municipalized, or attempted to municipalize, a portion of an investor-owned utility's service territory in the absence of an agreement. One municipality, the City of Winter Park, was municipalized pursuant to such an agreement. DEF previously had a franchise agreement that provided Winter Park with a unilateral purchase option at the expiration of the franchise agreement. In the instance of the Winter Park municipalization, DEF sought affirmative permission from the FPSC to be relieved of its obligation to serve the City of Winter Park, which the FPSC subsequently approved. Any municipality using DEF's transmission and distribution system following a municipalization will be considered a successor and its customers will be subject to the nuclear asset-recovery charge.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact DEF's operations, temporarily interrupting transmission, distribution and consumption of

electricity, hence reducing the collections of nuclear asset-recovery charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the DEF service area, which could cause the per-kWh nuclear asset-recovery charge to be greater than expected.

The only year with any significant loss of energy consumption due to natural disasters was 2004, when a series of three Hurricanes struck the DEF service area. The impacts came from "Charley" (Aug 13-20), "Frances" (Sep 4-10) and "Jeanne" (Sep 25-30). Estimated lost energy sales came from studying reduced levels of daily system requirements totaling 400,000 MWh over these three disasters. This represents about 1% of the total annual electric usage for 2004 (38,193 GWh).

Forecasting Electricity Consumption

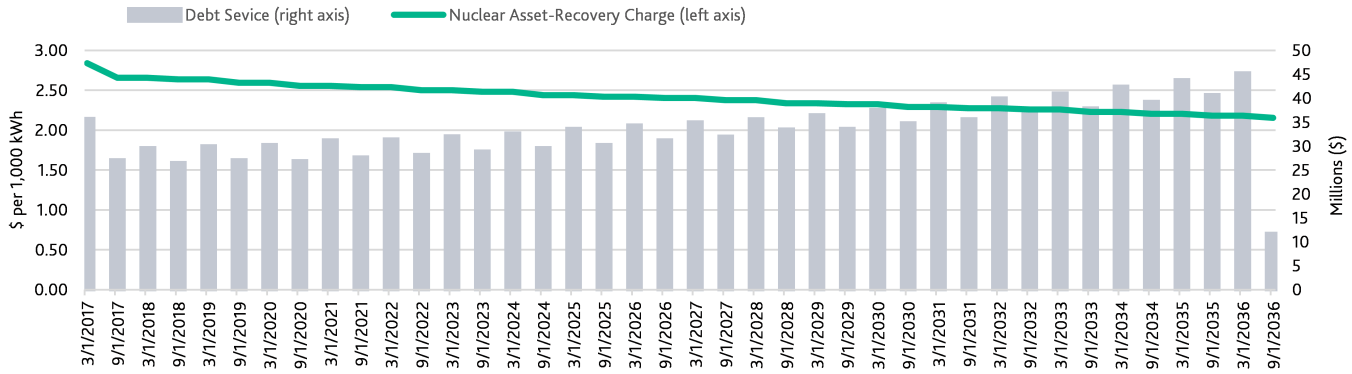
The nuclear asset-recovery charges are assessed based on forecasted customer usage. The amount and the rate of nuclear asset-recovery charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs. If the servicer inaccurately forecasts electricity consumption or underestimates customer delinquency or write-offs when setting or adjusting the nuclear asset-recovery charges, there could be a shortfall or material delay in nuclear asset-recovery charge collections prior to the next true-up.

The forecast utilized in the proposed bond structure is the 2016 Ten Year Site Plan filed with the FPSC in April 2016. Internal forecasts are updated at least twice per year but are not filed with the FPSC. The DEF forecast of customers, energy sales, and peak demand applies both an econometric and end-use methodology. External sources of data include economic series from Moody's Analytics and State population data from the University of Florida's Bureau of Economic & Business Research. Internal company forecasts are used for projections of electricity price, and weather conditions. The forecast incorporates population and household trends, employment and production trends, technology and energy efficiency trends, and weather and climate trends. DEF has a more granular forecast for the phosphate industry, at the customer level, due to the high concentration of customers in this industry among DEF's industrial customer base.

Exhibit 11 shows the forecasted nuclear asset-recovery charge per 1,000 kWh and scheduled debt service payments.

Exhibit 11

Nuclear Asset-Recovery Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: DEF; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Without an interim true-up adjustment, greater than 60% forecast variance would be needed leading up to any payment date to cause a payment default. Greater than 65% forecast variance would be needed in the first payment period to cause a payment default, assuming the servicer makes an interim true-up adjustment midway into the first payment period. By contrast the maximum forecast variance since 2011 has been less than 6%, as shown in Exhibit 12.

Exhibit 12
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	0.27%	-0.23%	-0.08%	2.14%	1.92%
Commercial	2.00%	0.82%	0.80%	1.40%	0.44%
Industrial	-3.09%	1.56%	-1.88%	3.87%	-3.25%
Public Authority	-2.40%	5.92%	0.50%	1.00%	-0.65%

Source: DEF

Cash Flow Analysis

We examined the cash flows that the nuclear asset-recovery charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the nuclear asset-recovery charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the nuclear asset-recovery charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the nuclear asset-recovery charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the nuclear asset-recovery charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the nuclear asset-recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Even in our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the nuclear asser-recovery charge is less than 7%.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the projections by DEF, which increases annually by a compounded 1 - 1.5%, through bond maturity
2. Implied net charge-offs of 0.2615%
3. Collection Curve projects 13.3% of collections within 30 days and 86.4% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains DEF or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case
4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year
5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

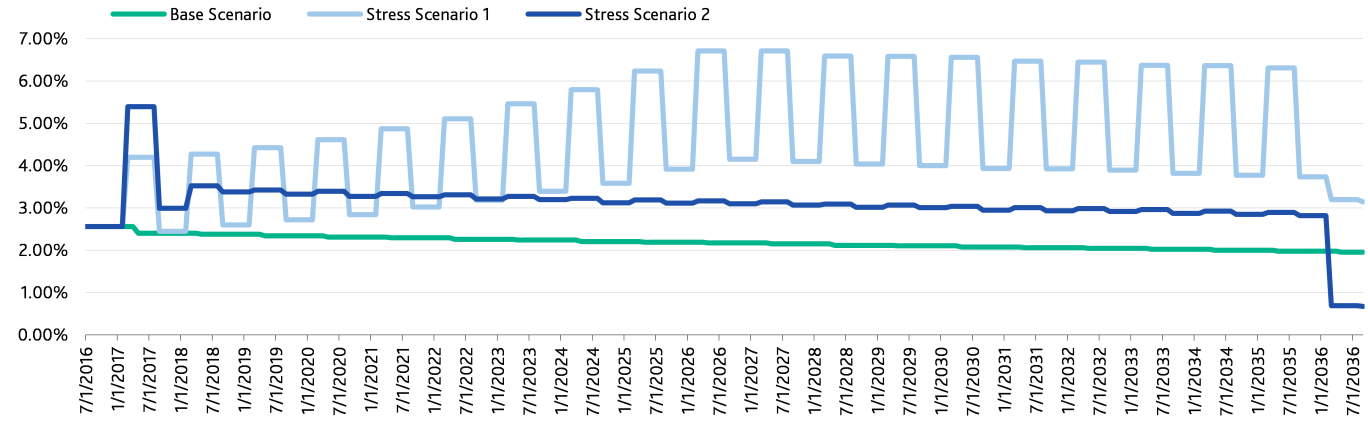
1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case
3. Collection curve is the same as in base case
4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 13 shows the projected nuclear asset-recovery charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 14 shows the projected nuclear asset-recovery charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 13

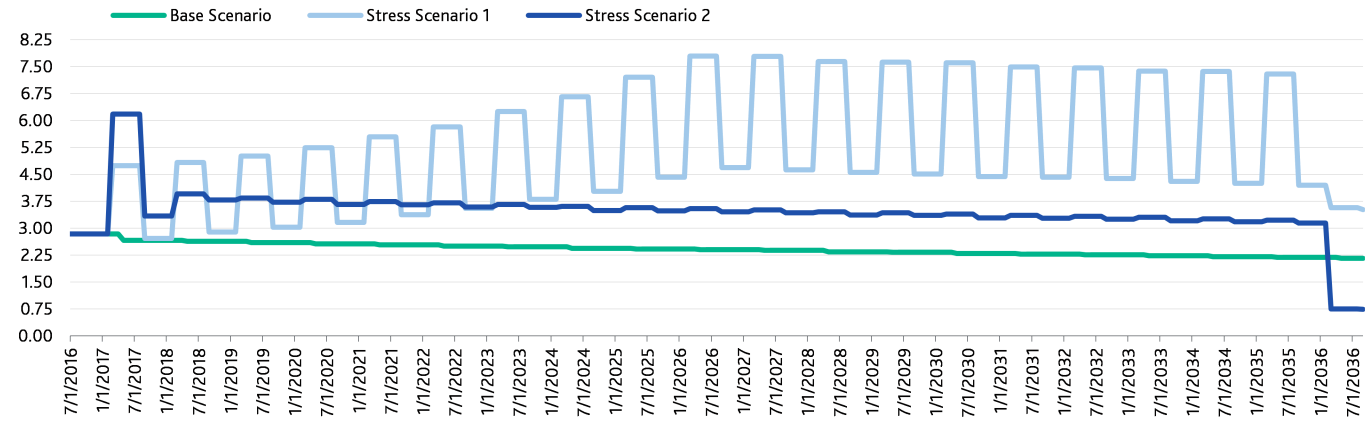
Nuclear Asset-Recovery Charge as a Percentage of a 1,000 kWh Customer's Total Bill



Source: DEF; Moody's calculations

Exhibit 14

Nuclear Asset-Recovery Charge ($ per 1,000 kWh)



Source: DEF; Moody's calculations

Comparables

As shown in Exhibit 15, stress scenario 1 is more stressful and results in a peak nuclear asset-recovery charge equal to about 6.94% of a 1,000 kWh per month customer's bill. This is low compared to other utility cost recovery deals.

Exhibit 15
Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2016A	7.21%	16.04%	10.40%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

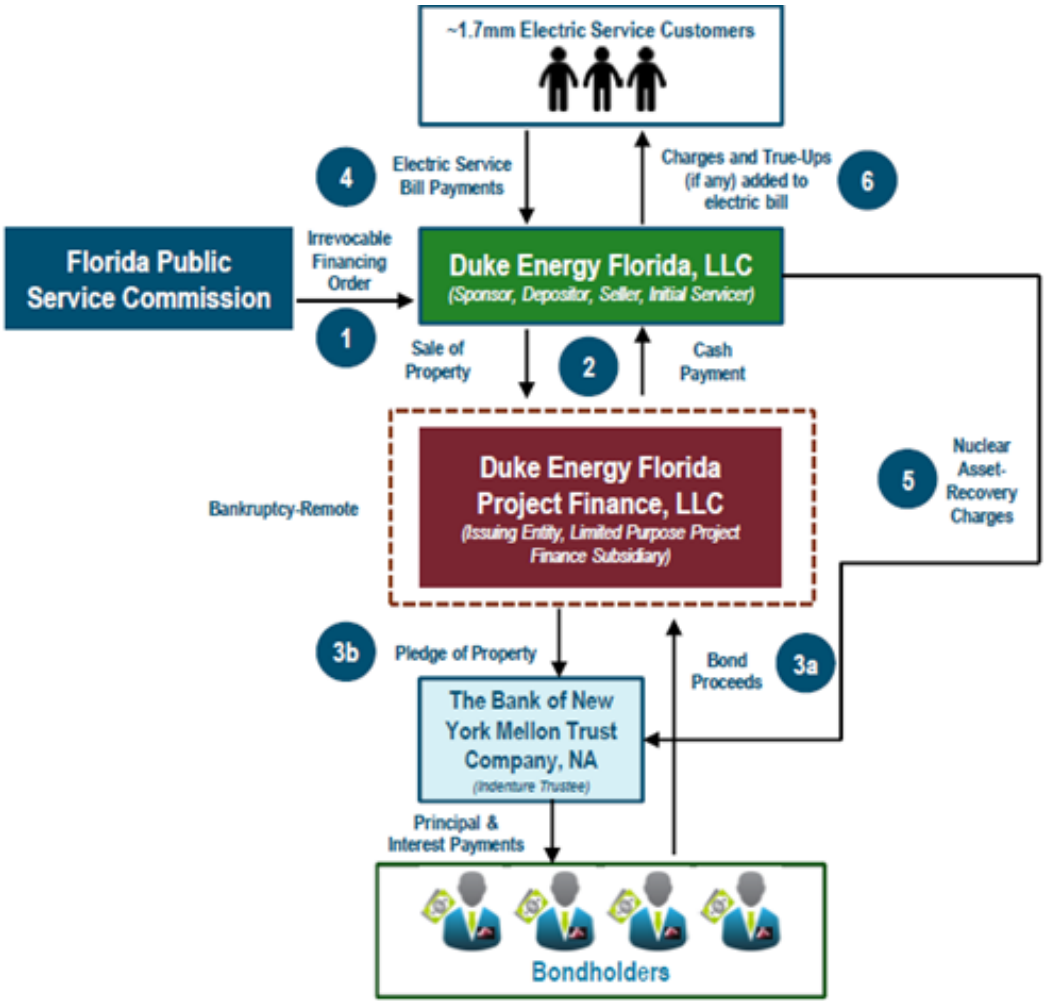
On the closing date, DEF will sell the nuclear asset-recovery property to the issuer pursuant to a sale agreement between the issuer and DEF. DEF will service the nuclear asset-recovery property pursuant to a servicing agreement between the issuer and DEF.

Securitization Structure Description

Structural Diagram

Exhibit 16 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 16
Structural Diagram



Source: DEF

1. FPSC issues financing order, permitted under state statute, that creates nuclear asset-recovery property in the hands of DEF
2. Via a true sale, DEF transfers the nuclear asset-recovery property to the issuer in exchange for cash payment
3. (a) Nuclear asset-recovery bonds issued in exchange for cash payment from bondholders (b) Nuclear asset-recovery property is pledged to indenture trustee for benefit of the bondholders
4. Electric utility customers pay charge on electricity bills on joint and several basis
5. Payments from electric utility customers used to pay principal and interest on the bonds
6. At least semi-annually, and, as frequently as monthly (any time), charge on all electricity customers adjusted to whatever level necessary (i.e., not subject to cap) to ensure timely principal and interest payments on the bonds

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the capital subaccount. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Capital Subaccount

On or before the date of issuance of the bonds, DEF will make a capital contribution to the issuer in an amount not less than 0.5% of the initial principal amount of the bonds, which will be deposited in the capital subaccount. Under the financing order, DEF will be entitled to a return on this capital contribution equal to the rate of interest on the latest maturing bond and payable according to the priority of payment set forth in the indenture and the series supplement.

Cash Commingling

The servicer is entitled to commingle the nuclear asset-recovery charges that it receives with its own funds until the funds are remitted to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from nuclear asset-recovery charges with other funds.

The servicer will remit nuclear asset-recovery charges based on estimated collections using a weighted average balance of days outstanding on DEF's retail bills. Nuclear asset-recovery charge collections remitted will represent the charges estimated to be received for any period based upon the average days outstanding and an estimated system-wide write-off percentage.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated nuclear asset-recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the indenture trustee within two business days.

Payment Priority

On each payment date, the indenture trustee will pay all amounts on deposit in the general subaccount of the collection account in the following order of priority:

1. payment of the indenture trustee's fees, expenses and outstanding indemnity amounts in an amount not to exceed annually $500,000 in the then current calendar year;
2. payment of the servicing fee plus any unpaid servicing fees from prior payment dates;
3. payment of the administration fee to the extent due on that payment date and of the fees of our independent manager plus any unpaid administration or management fees from prior payment dates;

4. payment of all of our other ordinary periodic operating expenses;
5. payment of the interest then due, including any past-due interest;
6. payment of the principal required to be paid on the final maturity date for each series or as a result of acceleration upon an event of default;
7. payment of the principal then scheduled to be paid in accordance with the expected sinking fund schedule, including any previously unpaid scheduled principal, paid pro rata among the bonds if there is a deficiency;
8. payment of any of our remaining unpaid operating expenses and any remaining amounts owed pursuant to the basic documents;
9. replenishment of any amounts drawn from the capital subaccount;
10. release to DEF of an amount equal to the rate of return on the amount contributed to the capital subaccount, including any portion of such rate of return for any prior payment date that has not yet been paid, so long as no event of default has occurred and is continuing; and
11. allocation of the remainder collected, if any, to the excess funds subaccount for future payments.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. a default for five business days in the payment when due of any interest on any bond;
2. a default in the payment of the then unpaid principal with respect to any series on the final maturity date for that series;
3. a default in the observance or performance of any covenants or agreements made by the issuer in the indenture or the series supplement (other than defaults described above) which continues for 30 days;
4. any representation or warranty made by the issuer having been incorrect in any material respect as of the time made, and such breach not having been cured within 30 days;
5. certain events of bankruptcy, insolvency, receivership or liquidation with respect to the issuer; or
6. a breach by the State of Florida or any of its agencies (including the FPSC), officers or employees that violates the pledge of the State of Florida.

Issuance of Additional Bonds

As authorized by the financing order, the issuer's organizational documents and the transaction documents give the issuer authority and flexibility to issue additional nuclear asset-recovery bonds in future transactions, with the approval of the FPSC. Each series of nuclear asset-recovery bonds that may be issued will be backed by separate nuclear asset-recovery property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of nuclear asset-recovery bonds. However, the issuer may not issue additional nuclear asset-recovery bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of nuclear asset-recovery property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the nuclear asset-recovery property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The issuer's limited liability company agreement requires that it have at least one independent manager, whose selection and replacement will be subject to ratification by the FPSC. The limited liability company agreement does not permit the issuer to engage in any activities not directly related to purchasing and owning the nuclear asset-recovery property and issuing one or more series of nuclear asset-recovery bonds. The list of permitted activities set forth in the limited liability company agreement may not be altered,

amended or repealed without the affirmative vote of a majority of the managers, which vote must include the affirmative vote of the independent manager.

Sponsor and Seller

DEF is the sponsor of the transaction and the seller of the nuclear asset-recovery property. DEF, a Florida limited liability company, is a regulated public utility primarily engaged in the generation, transmission, distribution, and sale of electricity in portions of Florida. DEF is an indirect, wholly-owned subsidiary of Duke Energy Corporation, one of the largest regulated utility holding company in the US.

DEF is subject to the jurisdiction of the Florida Commission with respect to retail utility rates, accounting, utility services, certain facilities, certain asset transfers, certain corporate mergers and other matters. DEF is subject to the jurisdiction of the Federal Energy Regulatory Commission under the Federal Power Act with respect to acquisitions, operations and disposals of certain assets and facilities, services provided and rates charged, conduct among affiliates and other matters, and its nuclear power plant is also subject to the jurisdiction of the Nuclear Regulatory Commission.

Administrator

DEF will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. DEF, as administrator, will be entitled to receive an annual administration fee of $50,000 payable annually, in arrears. The administrator may not resign or be removed without satisfaction of the rating agency condition.

Securitization Structure Analysis

The Series A bonds are a relatively simple sequential structure without subordination and the capital subaccount provides sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of DEF (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating

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REPORT NUMBER 1031259

MOODY'S
INVESTORS SERVICE

Standard & Poor's Reviews, Affirms, 68 Classes From 31 Stranded Cost Transactions

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OVERVIEW

- We affirmed our ratings on 68 classes from 31 stranded cost securitizations.
- All of the transactions are backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts supporting our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations.

NEW YORK (Standard & Poor's) Feb. 25, 2013--Standard & Poor's Ratings Services today affirmed its ratings on 68 classes from 31 stranded cost securitizations (see list).

The affirmations reflect the transactions' ongoing stable performance and their continued ability to pay interest and principal in a manner commensurate with an 'AAA (sf)' rating stress, in our view.

Stranded cost securitizations are typically backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts. As currently constructed, the enhancement supports our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations. These securities traditionally have been created under state legislation in conjunction with the state utility commission, with the utility as the

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seller/servicer of the assets. Key features of the deals include:

- There are irrevocable statutory provisions and regulatory approvals, including the creation of mandatory periodic true-up of a nonbypassable transition charge and an absolute transfer and first-priority security interest in transition property;
- The true-up mechanisms are in place to ensure the transition charge can be adjusted to reflect any deficit in collections, as well as any other credit enhancement accounts; and
- There are typically cross-collateralization features such that all the customer classes help pay down the bonds. There may be certain deals that have rate caps and/or do not allow cross-collateralization.

For more information on legal and economic defeasance, please see "Securitizing Stranded Costs," published Jan. 18, 2001 on RatingsDirect.

As part of our regular surveillance, we reviewed and affirmed 68 classes from 31 stranded cost transactions.

Standard & Poor's will continue to monitor the securitizations and take rating actions as we deem necessary according to our criteria.

STANDARD & POOR'S 17G-7 DISCLOSURE REPORT

SEC Rule 17g-7 requires an NRSRO, for any report accompanying a credit rating relating to an asset-backed security as defined in the Rule, to include a description of the representations, warranties and enforcement mechanisms available to investors and a description of how they differ from the representations, warranties and enforcement mechanisms in issuances of similar securities. The Rule applies to in-scope securities initially rated (including preliminary ratings) on or after Sept. 26, 2011.

If applicable, the Standard & Poor's 17g-7 Disclosure Report included in this credit rating report is available at http://standardandpoorsdisclosure-17g7.com

RELATED CRITERIA AND RESEARCH

- Standard & Poor's To Explicitly Recognize Credit Stability As An Important Rating Factor, Oct. 15, 2008
- Principles-Based Rating Methodology for Global Structured Finance Securities, May 29, 2007
- Legal Criteria For U.S. Structured Finance Transactions: Special-Purpose Entities, Oct. 1, 2006
- Securitizing Stranded Costs, Jan. 18, 2001

RATINGS AFFIRMED

AEP Texas Central Transition Funding II LLC
A
Rating

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A2	AAA (sf)
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

AEP Texas Central Transition Funding LLC
2002-1

	Rating
A-4	AAA (sf)
A-5	AAA (sf)

Atlantic City Electric Transition Funding LLC
2002-1

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Atlantic City Electric Transition Funding LLC
2003-1

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Centerpoint Energy Restoration Bond Company, LLC

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

CenterPoint Energy Transition Bond Company II LLC
A

	Rating
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

CenterPoint Energy Transition Bond Company LLC
2001-1

	Rating
A4	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

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Consumers Funding LLC
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Detroit Edison Securitization Funding LLC (The)
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Entergy Gulf States Reconstruction Funding I LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Entergy Texas Restoration Funding, LLC
Senior Secured Transition

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

FPL Recovery Funding LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding II LLC
2006-A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding LLC
2002-A

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Louisiana Public Facilities Authority-EGSL
2008

	Rating
A-1	AAA (sf)

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A-2	AAA (sf)
A-3	AAA (sf)

Louisiana Public Facilities Authority-ELL
2008

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Massachusetts RRB Special Purpose Trust 2005-1
2005-1

	Rating
A-4 BEC	AAA (sf)
A-4	AAA (sf)
A-4 CEC	AAA (sf)

Massachusetts RRB Special Purpose Trust WMECO-1

	Rating
A	AAA (sf)

MP Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

MP Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PE Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

PE Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PSE&G Transition Funding II LLC
2005-1

	Rating
A-3	AAA (sf)

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A-4	AAA (sf)

PSE&G Transition Funding LLC
2001-1

	Rating
A-6	AAA (sf)
A-7	AAA (sf)
A-8	AAA (sf)

PSNH Funding LLC
2001-1

	Rating
A-3	AAA (sf)

Rockland Electric Company Transition Funding LLC
2004-1

	Rating
2004-1	AAA (sf)

RSB BondCo LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2003-1

	Rating
A-4	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2004-1

	Rating
A-3	AAA (sf)

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Securitizing Stranded Costs

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Securitizing Stranded Costs

*(**Editor's Note:** We originally published this criteria article on Jan. 18, 2001. We've republished it following our periodic review completed on Dec. 1, 2016. As a result of our review, we updated the contact information and the related criteria, and corrected a reference in the section "Adequate Provision.")*

Electric utilities historically have enjoyed protected monopolistic status, in return for an obligation to provide service to the customer base whenever requested. In return, utilities have made significant long-term investments and entered into long-term power purchase contracts with the expectation that these would be recoverable through customer rates. In 1992, the enactment of the National Energy Policy Act introduced wholesale electric competition into the industry. Since then, almost half the states have taken steps toward a competitive retail market by legislating or ordering frameworks for "retail access," through which all customers will be able to choose their own electric generation supplier. With a competitive market taking shape, many utilities have found themselves saddled with significant unrecoverable contractual and sunk costs, generically known as stranded costs. These stranded costs are not new, but rather have already been approved by regulators and are incorporated in existing utility rates as part of traditional cost-plus regulation. If utilities are to compete in a deregulated market, however, they cannot pass these stranded costs along to customers. In many cases, the inability of a utility to recover a significant portion of these costs would result in significant financial deterioration, and in the worst cases, insolvency.

As noted, many legislatures and state regulatory commissions have established the means by which utilities can avert financial deterioration while also providing customers with lower rates. Asset-backed securitization is one such alternative. In several states, such as California, Pennsylvania, Massachusetts, Texas, New Jersey, Michigan, New Hampshire, Connecticut and Illinois, legislatures have enacted laws that enable utilities to finance the recover-y of at least a portion of their stranded costs by issuing bonds backed by a statutory right to recover stranded costs.

In December 1997, the three California investor-owned utilities: Pacific Gas & Electric Co., Southern California Edison Co., and San Diego Gas & Electric Co., securitized more than $6 billion of their approximately $28 billion of total stranded investment. During 1998, Illinois Power Co. securitized $864 million followed by Commonwealth Edison Co.'s $34 billion securitization transaction. In 1999, one Massachusetts utility and three Pennsylvania utilities completed securitization transactions. Boston Edison Company issued $725 million of rate reduction certificates. PECO Energy Co. issued $4 billion, PP & L Inc. issued $2.42 billion and West Penn Power Company issued $600 million of transaction bonds. In 2000, PECO issued an additional $1 billion and in 2001, utilities in New Jersey, Connecticut, Michigan, and Texas may come to market with rate reduction bonds.

Utilities in states that have not yet addressed industry restructuring through legislative action or regulatory order, such as Indiana, Kentucky, Florida, and North Carolina, are generally low-cost producers with limited, if any, stranded assets. These states are much less motivated, therefore, to pursue industry restructuring, let alone securitization, at the present time. Whether or not these states ultimately pass relevant legislation, however, the relative competitive standing of their utilities will inevitably be diluted as high-cost utilities in other states shed a substantial portion of their high-cost assets through securitization.

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Standard & Poor's believes that securitization of stranded costs is at least neutral, and generally positive for utility credit quality. The utility acquires cash up front, instead of receiving an increasingly at-risk revenue stream over time. Proceeds of the securitization are expected to be used principally to shrink a utility's total capitalization structure, including retiring debt that carries a higher coupon than that borne by the highly rated securitized bonds. In most cases, these interest savings are passed along directly to customers in the form of lower rates. Generally, the amount of rate reduction bonds that the utilities issued was designed specifically to generate a legislatively mandated rate reduction for customers.

Business and Legal Overview

What Are Stranded Costs?

Stranded costs are broadly defined to include any costs that were incorporated in the traditional regulatory cost-plus scheme that cannot be passed on to customers in a competitive marketplace. The most significant of these stranded costs are investments in high-cost nuclear and fossil plants. They also include deferred and capitalized operating costs, conservation and economic development expenditures, nuclear decommissioning costs, and long-term contractual obligations with high cost nonutility generators.

In the past, utilities constructed large, centrally located plants to gain economies of scale in producing electricity. Extremely long construction lead times and overly aggressive demand forecasts caused management to err on the side of oversupply to meet customer demand. Furthermore, the monopoly environment meant utilities lacked a strong incentive to contain costs. Indeed, the larger a utility's rate base was, the more investment on which the utility could earn a return. In addition, costs were exacerbated by circumstances. The last round of base-load construction occurred in the late 1970s and early 1980s, which was an era of high inflation and high interest rates. Finally, the nuclear incident at Three Mile Island in 1979 resulted in heightened Nuclear Regulatory Commission supervision, extending the timetable for plant completions and elevating capital costs significantly.

Since that time, new technologies have greatly reduced the cost of building generating facilities. Even more importantly, the economics of building smaller plants have continued to advance. The lead time for construction has been drastically reduced, from as much as 10 years to as little as 18 months. This reduction is in part due to the construction of much smaller-scale highly efficient plants. As a result, the cost of incremental generation today is significantly lower than the embedded cost of plant of most utilities. The differential is most evident in nuclear plants. For instance, the 1,143 megawatt (MW) Nine Mile Point 2 nuclear plant, operated by Niagara Mohawk Power, was completed in 1988 at a cost of about $5,000 per kilowatt (kW), after a construction period of more than 10 years. This compares with a 500 MW gas-fired combined-cycle plant today that can be built in about 18 months at a cost of $450 to $550 per kW. While prudency hearings did lead to significant write-offs during the rate base proceedings of Nine Mile Point 2, the bulk of these costs were simply included in rates and are now being recovered from customers over a lengthy period of time.

Developments in Industry Environment

The enactment of the National Energy Policy Act of 1992 (NEPA) marks the beginning of the end of the last major government-protected monopoly. NEPA authorized the Federal Energy Regulatory Commission (FERC) to mandate

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that utilities become open-access common carriers for wholesale electric sales, known as wholesale wheeling. Wholesale sales are bulk power sales between utilities or between a utility and a third-party producer. If two utilities are not interconnected, they would need access to a third party's transmission network to complete such a transaction.

The ability of a utility to sell power to an end user that is not within its franchise service territory, or the sale of power from an independent power producer to an end user, is called "retail wheeling." Currently, utilities are not permitted to engage in retail wheeling. However, retail customers, aware that there may be cheaper power sources than their current supplier, are pressuring state regulators to permit them to buy power from alternative suppliers. While most regulators agree that competition will lower the price of power, some assert that the objective is not merely to lower rates, but to provide customers with the option to choose their power provider. The vast majority of utilities and regulators concur that retail wheeling is inevitable, so states have had to grapple with how to make the transition from a regulated to a competitive environment. As mentioned earlier, many states have passed laws to phase in direct access to all customers and most of these legislative initiatives include securitization of stranded costs as a means of reducing utilities' financial exposure to a competitive retail environment.

Recovery of Stranded Costs

Vertically integrated electric utilities provide customers with three basic functions: generation, transmission, and distribution. Because of legal, regulatory, and technological advances, generation no longer displays monopoly characteristics. Transmission and distribution, or the "wires" function, on the other hand, will likely remain natural monopolies for the foreseeable future since it would be prohibitively expensive, and environmentally difficult, to construct redundant wires. Transmission consists of the high-voltage system that moves power in bulk from generating plants to an electric distribution system or a load center. Distribution receives stepped-down power, which is then transported at lower voltages to individual end users.

As part of various state legislative initiatives, utilities are being required to functionally, if not legally, disaggregate the vertically integrated components of their business. The costs of each function will be determined and itemized, or "unbundled," on customers' bills. While customers may purchase the actual electrons from a source other than their local utility, they must continue to transport this power over the distribution wires owned by their local utility. The local utility will use its wires system to charge customers for the services it provides, which will include transmission of power bought from other suppliers. Other services, such as billing and metering, could be maintained by the utility or could be opened to competition as well. Any stranded cost that is identified, isolated, and by mandate recoverable in utility rates, will also be recovered as a "wires charge;" it cannot be recovered as part of a generation charge, since customers may purchase generation from an alternative source.

Stranded costs, which have been realized as such only with the prospect of a competitive market, are included in current utility rates, but they are being amortized over as long a period as 30 to 40 years. Utilities need to accelerate the recovery of these above-market costs as quickly as possible if they are to lower their rates in preparation for a competitive environment.

Statutory Securitization of Stranded Costs

Until now, securitization of stranded assets has been made possible by state statute. In general, such statutes provide that the stranded assets themselves, plus interest on any bonds backed by stranded assets, the costs of servicing the

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bonds, and the costs of bond issuance all be collected through imposition of a tariff that is collectible from the utility's customers. While differing in particulars, the legislation in Pennsylvania, California, Illinois, Massachusetts, Texas, Connecticut, New Jersey, and elsewhere shares certain characteristics that are significant from a rating perspective.

The statutes specifically provide for securitization of the stranded costs through their sale to a financing subsidiary, and ultimately, to a trust that issues the bonds. The statutes award true sale status to the transfer of the stranded assets to a finance subsidiary. This should help support the legal conclusion that the transfer constitutes a true sale for bankruptcy purposes.

The statutes also provide that any proposal for a securitization of stranded assets be approved on an irrevocable basis by the relevant utility regulatory commission. The commission must set a tariff schedule. A tariff would be included in the ordinary bills sent to customers, and would amortize the stranded assets over the life of the proposed securitization. The tariff would be a separate itemized charge on the customer's bill, and could be either a fixed charge or tied to electricity usage, in either case included in the utility's wires charge. In scheduling the tariff needed to amortize the assets fully, the commission will take into account the utility's forecast regarding the projected size and demographics of its customer base. Where the tariff is tied to electricity usage, predicted customer usage will be important.

The tariffs that are actually collected from customers may fall short of what was originally anticipated. In addition to defaults in bill payments, the customer base might decline due to economic and/or technological factors, or usage might vary from what was originally predicted. This might happen, for instance, if the winter is unusually warm or the summer particularly cool. These are credit risks that could impact the ability of the tariff to amortize the assets fully. To address these risks, the legislatures have created a statutory form of credit support, known as the "true-up" mechanism. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers, so that the bond amortization schedule is met. This minimizes credit risk, except in the tail end of the transaction after the final true-up has occurred. Liquidity risk will, of course, exist during the periods between true-ups, to the extent that collection shortfalls occur.

The true-up mechanism also may effectively minimize prepayment risk. While there may be a tariff collection shortfall, it is also conceivable that excess collections may be received. This might occur, for example, if the customer base grows at a greater rate than originally anticipated when the tariffs were established. If collections exceed expectations for a particular period, the true-up mechanism could potentially reduce the remaining tariffs accordingly, so that the remaining transaction amortizes as scheduled.

When the utility applies for a true-up, the commission may not grant it immediately. The commission's delay will add to liquidity risk, because the shortfalls in collections to be remedied by the true-up will last for a longer period, until the commission finally grants the true-up. A delay by the commission will not create credit risk during the transaction, because once the true-up is in place, the adjusted tariff will take into account any collection shortfalls caused by its delay. But a delay in the true-up could result in a credit loss at the tail end of the transaction. The commission might take so long to grant the true-up that the final true-up never occurs. The statutes prevent this potential credit loss, as well as limit liquidity risk caused by a delay, by setting a deadline for implementation of the true-up. For example, California requires that the commission implement a true-up within 90 days of each anniversary date of the

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transaction. Other statutes simply require that the true-up filing with the commission becomes effective as early as the subsequent month.

The duration of these transactions and the ability to impose true-up periods and tariff collections indefinitely depend initially on whether the statutes impose a limit on how long the tariff may be collected from the utility's customers. Even where no limit is set as a statutory matter, the final true-up period, and the deadline for tariff collection, will depend on the legal final maturity date set for the bonds.

A utility might change hands for some reason, or file under Chapter 11 of the U.S. Bankruptcy Code. Such an event could strike at the heart of a potential securitization. Stranded assets will not be recovered unless the utility continues to provide electricity, bill its customers, transfer the tariff to the securitization trust, and apply for true-ups when necessary. The statutes address this problem by requiring that any successors to the utility, whether through bankruptcy, merger, or sale, must perform all of the utility's obligations in connection with the securitization.

The statutes provide another feature, by providing that, contrary to what would usually occur under the Uniform Commercial Code (UCC), there is a continued security interest in collections that have been commingled with other funds of the utility. This eliminates the usual credit risk associated with commingled funds in the event of a bankruptcy of the utility, although it fails to alleviate the liquidity risk and potential credit risk caused by the automatic stay (see Protection Against Credit Risk Caused By Commingling).

Finally, the statutes purport to create new property interests that must be perfected in a manner different from a UCC security interest. However, there is the possibility that stranded assets might still be considered subject to the prior lien of existing mortgage bonds. As a result, proceeds of the securitization might need to be applied to pay down the debt secured by the prior lien. This would, in any event, be positive from a credit perspective, because the bonds being retired (typically general obligation bonds bearing the rating of the utility) would have a higher interest rate than the 'AAA' rated securitized bonds used to retire the obligations.

Significance of Statutory Securitization

To date, stranded cost securitizations rated by Standard & Poor's have been based on legislation promulgated specifically for that purpose. Nevertheless, Standard & Poor's understands that, as a regulatory matter, state public utility commissions have, de facto, historically permitted recovery of stranded costs through rate adjustment.

While public utility commission regulatory action may well be sufficient to accomplish a securitized recovery of stranded costs, Standard & Poor's believes that there may be certain advantages to a legislation-backed securitization. Statutes have the benefit of having undergone the political process. Affected interests are given the opportunity to introduce, and argue for, their respective views. Hearings, drafting and amendments, floor debate, and overall legislative, and press and public scrutiny is the process by which political compromise is achieved and consensus built. The political process is viewed as investing the resulting legislation with a considerable degree of stability and support.

Viewed from the perspective of legal capacity, legislation has other advantages. At the heart of stranded cost securitization is the creation of a property right in the transition charges that serve as the basis for debt service. While it is clear that state legislatures are empowered by due process of law to create property rights, and to define and record how these rights are to be enjoyed, the ability of a state public utility commission to achieve the same end by

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regulatory compact may not be as certain.

Statutory status provides both constitutional and political protection against the risk that the creation and pledge of securitization property might be impaired by subsequent amendment. Historical precedent indicates that a legislature is unlikely to reverse itself once it has enacted a statute. Even if a political reversal were to occur, the Pennsylvania, Massachusetts and California statutes recognize that the bondholders possess certain constitutionally protected rights. Both statutes provide that if the right to recover stranded assets is compromised in any way, the bondholders are entitled to adequate compensation.

Nevertheless, in jurisdictions where public utility commissions may reasonably be viewed to have the capacity and authorization to order a recovery of stranded costs through a securitization-type procedure, and in which the commission has a stable history of consistent regulatory action, and in which the courts have paid regular deference to commission order, Standard & Poor's will consider regulatory-based recovery procedures case by case. However, any such consideration will necessarily involve a comparison by Standard & Poor's of the proposed regulating action and its enactment in contrast to rated, statute-based recovery plans.

Overview of Stranded Cost Securitization

Differences From Traditional Asset-Backed Transactions

Several key aspects differentiate the securitization of stranded costs from the securitization of more conventional asset types.

Cash Flow Receivables In a typical securitization, the originator of the assets transfers a pool of receivables to a trust and receives payment based on an agreed-upon value for those receivables. The key in this case is that the receivables have already been created. In contrast, stranded assets are not traditional receivables. Although the statutes create a present property right to future collection there is no initial cash flow backing the debt. Stranded assets represent the present right to the cash flow from receivables that will be created in the future when performance, in this case power generation and delivery, has been provided. But until this performance by the utility company takes place, the customer is not obligated to make any payments. Power generation is thus critical to assure full and timely payment to securityholders. As a result, there is a greater dependence on the utility as seller/servicer to do more than just collect payments on existing receivables and liquidate collateral to the extent needed.

Dependence on Servicer Servicer bankruptcy filings generally cause a change in servicer in most asset-backed transactions to prevent any disruptions in the required servicing and collections on the portfolio. Therefore, a substitute servicer must be ready and willing to take over all servicing responsibilities, if necessary. But unlike in typical securitizations, the transaction cannot fully rely on a substitute servicer. A utility does not just collect payments; it must continue to provide power. Because provision of electricity is fundamentally a necessary service, however, Chapter 7 liquidations are unlikely. In contrast, utilities will continue to operate in Chapter 11 reorganization, and thus, provide power and enforce collection from customers. Security is provided by the statutory mandate that collection obligations must be assumed by any successor corporation, including successors pursuant to reorganization, or otherwise. Due to the regulated nature of the industry a state-by-state review of successor servicing arrangements will be performed by Standard & Poor's.

True-up as Credit Support Credit support is entirely structured within the finances of the typical securitization. In contrast, in these transactions credit support has been provided by the statutory true-up mechanism. The parties must initially come up with a proposed amortization schedule. This schedule determines the tariff to be charged to recover

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the stranded costs, as well as the costs of the securitization itself. In setting this tariff schedule, the utility makes certain assumptions about charge-offs and sales over the following year or even decade. These assumptions will necessarily be inaccurate, especially as the date of forecast becomes increasingly remote. As a result, the stranded costs collected from customers could be less than those needed to repay the bonds. The true-up addresses this risk. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers. This effectively eliminates credit risk, except in the tail end of the transaction after the final true-up has occurred.

It should be understood that the true-up is not quite the same thing as an unlimited cash collateral account. Because the true-up will only be as good as collections in the following year, the amount of a current year's shortfall will not be fully recovered in the next year, due to charge-offs and forecast error occurring in that year. The amount will decrease over time, however, as successive true-ups are implemented. Where statutes do not place a limit on the tenor of the bonds and permit indefinite true-ups, the legal final maturity can simply be extended as a structural matter to gain the benefit of additional true-ups. This allows for as many true-ups as necessary to reduce the shortfalls that cannot be collected because they occur in what may have been originally contemplated as the final year of the transaction.

The true-up can make the amortization schedule for the bonds more predictable, unless dramatic consumption changes occur. This is because the true-up may adjust the amount payable to the trust by the customer base to the extent that there has been a shortfall or surplus in the prior period.

Perfection Mechanisms As stated above, the statutes provide for their own methods and location for filing and perfecting stranded assets. This may or may not result in the conclusion that stranded assets are new property interests not subject to UCC filing and priority rules, and thus are not subject to prior liens under the UCC.

Overcollateralization as Additional Credit Enhancement As mentioned earlier, the true-up mechanism will play an integral role in the transaction structure. The frequency of the true-up, for example, will influence the need for additional credit enhancement. Overcollateralization is the most likely form of credit support. Overcollateralization would cover the risks in the stub period following the final true-up, as well as make up for past shortfalls in collections that were never fully trued-up in the past.

Sale Accounting and FAS 125 Stranded cost securitizations do not possess sale status as an accounting matter under FAS 125. The Security Exchange Commission's Office of Chief Accountant has indicated that while the utilities may be able to sell the right to recover stranded costs as a legal matter, they will not be able to remove the assets (and associated debt) from their balance sheets under FAS 125. Nevertheless, as long as the transaction is structured as a true sale for legal purposes, Standard & Poor's will "back out" for analytical purposes nonrecourse debt and associated carrying costs from the utility's consolidated financial statements. While off-balance-sheet treatment would have enabled a more clear-cut analysis, Standard & Poor's will attempt to recognize the economic (as opposed to the accounting) reality.

Debt for Tax Treatment Any utility intending to securitize stranded costs will likely seek a private letter ruling from the IRS that states that the sale of the assets constitutes a "debt for tax transaction." In other words, the sale would not result in the immediate recognition of income. If the sale were deemed to provide immediate income, the utility would incur an immediate tax liability as well. This would destroy the economics of a securitization.

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The Rating Approach

Specific credit and legal risks that arise in securitizing stranded costs are addressed below. Standard & Poor's pursues a general rating methodology that attempts to stress in cash flows the ability of the true-up mechanism to ensure timely payment of interest and repayment of principal. In addition, it attempts to determine the number of true ups needed to meet these payments, that is, the structure's ability to meet its legal final maturity.

Credit Risks

Inaccuracy in Forecasting As mentioned earlier, the funds necessary to pay the stranded assets of the issuer are dependent on the tariff set by the commission and collected from the utility's customers. Tariff schedules are compiled for each customer class so that, taken together, the tariffs charged will amortize the stranded assets over the life of the securitization, while making timely interest payments. The tariff amounts themselves are based on estimates of cash flows to be collected from the customer base. The tariff amounts are thus determined based on such factors as the utility's forecast of population growth or decline, and seasonality in expected usage.

A shortfall in tariff collections can be caused by lower than expected usage due to:

Unanticipated customer migration (anticipated migration is included in the forecasting). Residential and small business customers are considered low risk in terms of customer migration. Large industrial customers, on the other hand, are considered a significant risk that requires additional stress to the cash flows (see Cash Flows). Additionally, as the term of transition bond issued exceeds the 6-8 years historically seen, technology driven customer migration increases significantly and begins to impact usage from commercial and small business customers.

Unanticipated weather conditions. Seasonal weather fluctuations are studied, and typically accounted for in setting the tariff charge.

Forecast error negatively impacts liquidity on the bonds and may "push out" the maturity of the bonds by requiring additional true-ups before the bonds can be paid out. To capture this risk, historical forecasting error is stressed at a certain multiple depending on the rating sought.

Where the tariff is recoverable from large industrial and commercial customers, Standard & Poor's will require data stratifying these customers by revenues generated. The cash flows will be additionally stressed to account for a potential loss in revenues caused by relocation of those customers with a high concentration risk in revenue generation for the utility.

Certain states have legislated rate caps on either the transaction charge for specific customer classes or on the total customer charge (i.e. through mandated rate reductions). Standard & Poor's will review the cash flow models to confirm that these rate caps are respected in stress scenarios.

Higher-Than-Expected Charge-Off Experience Like other forecasting variables, anticipated charge-offs are included in forecasting for purposes of setting the tariffs. Charge-offs may be higher than expected based on historical experience due to a variety of factors, including economic changes and unforeseen disasters. To account for this risk, charge-off history is stressed by the multiple relevant to the rating sought.

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Commingling by Aggregators The recent mandated unbundling of generation, transmission, and distribution charges has paved the way for alternative generation suppliers. The consumer may choose to purchase its generation services from an alternative supplier, while continuing to pay transmission and distribution (wires charge) to the utility. As discussed earlier, the tariff would be included in the wires charge, so that collection of the tariff itself would not be endangered by the existence of competition for generation services. However, commingling risk could exist as a result of potential billing arrangements for the utility's transmission and distribution services on the one hand, and the alternative energy provider's generation services on the other.

Generally, alternative energy service providers (retail electric providers; third-party servicers) may provide a consolidated bill for their generation services and the tariff owed to the utility. Where this is the case, the energy services provider is liable to pay the tariff regardless of whether it has received collections from the ultimate users. As a result, the securitization is exposed to commingling risk, and the resulting loss of commingled tariffs, in the event of the bankruptcy of an energy services provider.

This risk can be mitigated by certain restrictions on the length of time that an energy services provider may commingle funds before consolidated billing and service is terminated. If the energy services provider becomes delinquent, direct and consolidated billing may cease and service and separate billing to the end-user customer would be made up for the tariff. This means that the aggregator could commingle funds for a number of days before consolidated billing were terminated. To address this risk, Standard & Poor's stressed cash flow runs eliminate one month of collections per year at the utility's peak billing cycle.

This or other risks involving alternative energy providers may exist in other stranded cost securitizations. Standard & Poor's will assess these risks and the resulting necessary cash flow stresses on a case-by-case basis.

Estimate of Tariff Based on Collections Curve Generally, utilities are unable to allocate amounts received to various charges on the bill, so they were unable to calculate what percentage of collections constituted tariff collections. To address this problem, the utilities prepared forecasts of the percentages of amounts expected to be received during each of the following six months. These forecasts were based on collections curves developed periodically based on accounting studies and collections studies performed by the companies. For each monthly billing period, collections were estimated over six months based on the collections curve.

When the actual tariff remittances by customers are calculated (on the seventh month following each monthly billing period), either too much or too little may have been paid for that billing period. If the amount remitted has been less than the actual tariffs collected during that six-month period, the shortfall will be made up the following month out of the servicer's (the utility's) own funds. Thus, if the servicer is bankrupt (Standard & Poor's assumption), there is a risk the bondholders will lose that portion of the tariff. If the actual tariff amount has been less than the estimated tariff collections remitted to the trust, the servicer would be entitled to withhold the excess amount paid from the next month's remittances.

It is not clear whether this risk will be present in other securitizations. To date, the risk of lower-than-actual remittances has not been separately stressed in the cash flow runs. The one month of lost collections (see Commingling by Aggregators) has been sufficient to cover this risk. Standard & Poor's also has relied on data provided by the company showing relative lack of volatility in the collections curve.

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Higher Tariff An increase in tariff resulting from higher true-ups might become burdensome to consumers. This risk might have a spiraling effect, because greater charge-offs or customer migration or decreased usage might result, which in turn would result in the need for increased true-ups. Standard & Poor's will assess this risk by examining the highest per kWh tariff charge reached under the relevant stress scenarios. This risk increases as the term of the transaction increases to 10-15 years given greater technological/migration risk.

Cash Flows Two cash flow runs are generally required in rating stranded costs: a compounding forecast error run and an oscillating forecast error run, implementing the stress scenarios described below. These runs are created to test liquidity as well as the transaction's ability to meet the final maturity of each class of bonds in the transaction. They do so by creating scenarios where the true-up in the tariff amount (the reset of the tariff to reflect prior experience with actual collections and recover prior shortfalls in collections) continuously fails to reflect actual collections.

Compounding Forecast Error Run The compounding forecast error run assumes a compounding stressed error in forecasting resulting in a continual decline in actual tariff collections over what was forecast for that year. Assume, for example, that during year one, sales are 90% of the original sales forecast, that is, forecast error reflecting a multiple of the average forecast error for the customer class, where actual collections are less than expected collections.

At the end of year one, the tariff charge is recalculated assuming that year two customer sales will be what was experienced in year one, that is, 90% of the original expected forecast. Instead, year two sales are only 81% (90% of 90%) of the original sales forecast.

The sales decline is generally based on a multiple of the absolute value of the largest historical non-weather-normalized forecast variance by customer class. This compounding is assumed to continue from year to year over the life of the transaction.

Oscillating Forecast Error Run The oscillating forecast error run assumes a scenario where in one-year tariff collections exceed expectations, so that in the following year, the tariff is reset based on the prior year, only to experience a shortfall in actual collections. Assume for example that the appropriate stressed forecast error is 10%. During year one, sales are 90% (10% below) the original sales forecast. At the end of year one, the tariff is recalculated assuming that year two sales are also 90% of the original forecast. Instead, year two sales are 99% (110% of 90% level) of the original forecast. The tariff for the following year is reset assuming 99% of original forecast collections, only to receive 90% of originally forecast collections. This oscillation between 90% and 99% of original forecast is assumed to continue over the life of the transaction.

Legal Final Maturity The legal final maturity dates on stranded cost transactions are often set at up to two years beyond expected maturities. This additional period acknowledges the long-term nature of the liabilities being rated, and the corresponding possibility that fundamental changes in technology might take place that further stress the transaction in an unforeseen manner. One currently known possibility is that over time customers may increasingly switch to self-generation, which would enable them to cease paying the wires charge and thus, the tariff. Certain transactions have reduced this period by requiring more frequent (e.g. monthly) true-ups during the final year or two of the transaction.

Legal Risks

Reliance on Commission to Implement True-Up, and Potential Delay in Approving the True-Up Standard & Poor's believes that so long as the statute clearly specifies the maximum period before which the commission is compelled to implement the true-up, any shortfall in collections resulting from the delay can be sized and factored into the cash flow projections. Certain structures may permit the application of principal collections as liquidity for any interest payments due to noteholders during any true-up delay. In the absence of such features, adequate provision for liquidity and additional credit support should be demonstrated to Standard & Poor's.

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Adequate Provision Law permits alteration or limitation of right to transition property and right to collect tariffs if "adequate provision" is made to the bondholders. Although there has been no conclusive demonstration as to what constitutes "adequate provision," and how such alteration or limitation would affect timely interest and principal payments on the bonds, Standard & Poor's, in rated transactions, has received legal assurances that any such alteration would be constitutionally prohibited were it substantially to impair the security for the bonds. While such assurances do not really define adequate provision, Standard & Poor's believes, in practice, that adequate provision should prove to be the functional equivalent of the pledged transition property.

Stranded Assets to Aid Industry Restructuring

Securitization of stranded assets provides an efficient method electric utilities can use to quickly free themselves from the high cost of stranded assets that prevents them from becoming players in the emerging competitive retail generation market. At the same time, the statutory true-up mechanism provides strong credit support that has withstood 'AAA' stress criteria applied by Standard & Poor's.

Related Criteria

- Post-Default Ratings Methodology: When Does S&P Global Ratings Raise A Rating From 'D' Or 'SD'?, March 23, 2015
- U.S. Public Finance: Electric And Gas Utility Ratings, Dec. 16, 2014
- Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings, Oct. 24, 2013
- Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
- Global Investment Criteria for Temporary Investments in Transaction Accounts, May 31, 2012
- Principles Of Credit Ratings, Feb. 16, 2011
- Methodology: Credit Stability Criteria, May 3, 2010
- Use of CreditWatch And Outlooks, Sept. 14, 2009
- U.S. Legal Criteria For "Recycled" Special-Purpose Entities, Sept. 19, 2002

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A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.

PART II
FAIR ADJUSTMENT

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

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Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

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Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

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i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the

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applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

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Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

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2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

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1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

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FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

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(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

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PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an

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adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

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Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

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2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

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Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

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Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

Non-application, Financial Administration Act, s. 28[7]

37xx. Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[7] Note - see s. 51 of the Electricity Act, 1998

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[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

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1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

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[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From:	Gadi Mayman
To:	Mike Manning; Ken Kandeepan; Ronald Kwan
Cc:	Anna Strathy
Subject:	Fw: Guarantee
Date:	Friday, April 21, 2017 2:39:42 PM
Attachments:	LAWS OF THE STATE OF NEW YORK - CHAPTER 173 OF 2013.docx summary of securitization provisions in LIPA Reform Act.docx Summary of Duke Energy Securitization.docx Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf Moody"s - Long Island Power Authority Utility Cost Recovery Bonds - Seri....pdf Moody"s - Duke Energy Florida Project Finance, LLC Series A Bonds.pdf S&P - List of S&P Rated Stranded Cost Transactions (2013).pdf S&P - Securitizing Stranded Costs_S&P Criteria (2001).pdf Fair Hydro Plan Act (April 20 2017) Consultation v3.docx

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From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:38 PM
To: Gadi Mayman; Anna Strathy
Cc: Tobias P. Whitfield (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Some more information sent by Carolyn.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were

more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.
A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.
Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.
This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.
Happy to answer your questions or walk you through the proposed bill.
Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,
Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.
We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.
Thanks!
Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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ASSEMBLY BILL #**A8073** SAME AS SENATE BILL #**S5844**

LAWS OF NEW YORK, 2013

CHAPTER 173

AN ACT to amend the public service law, the public authorities law, the executive law and the education law, in relation to the powers and duties of the department of public service and the Long Island power authority; to repeal subdivision (u) of section 1020-f of the public authorities law relating to general powers of the authority; and providing for the repeal of certain provisions upon expiration thereof (Part A); and in relation to the issuance of securitized restructuring bonds to refinance the outstanding debt of the Long Island power authority (Part B)

Became a law July 29, 2013, with the approval of the Governor.
Passed by a majority vote, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. This act enacts into law major components of legislation relating to issues deemed necessary by the state. Each component is wholly contained within a Part identified as Parts A through B. The effective date for each particular provision contained within such Part is set forth in the last section of such Part. Any provision in any section contained within a Part, including the effective date of the Part, which makes reference to a section "of this act", when used in connection with a particular component, shall be deemed to mean and refer to the corresponding section of the Part in which it is found.

Section three of this act sets forth the general effective date of this act.

PART A

Section 1. Section 3 of the public service law, as amended by chapter 8 of the laws of 2012, is amended and a new section 3-b is added to read as follows:

§ 3. Department of public service. [~~1.~~] There shall be in the state government a department of public service. The chairman of the public service commission shall be the chief executive officer of the department. He or she shall appoint and shall have the power to remove, subject to the provisions of the civil service law, all officers, clerks, inspectors, experts and employees of the department, and to approve all contracts for special service. The chairman shall designate one of the commissioners in the department or an officer of the department to act as deputy chairman during the absence or disability of the chairman and during such times such deputy chairman shall possess all the powers of the chairman as chief executive officer of the department.

[~~2. The department shall, upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of said authority pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or~~

EXPLANATION--Matter in ***italics*** is new; matter in brackets [-] is old law

to be omitted.

~~CHAP. 173 2~~

~~by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the Long Island power authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department according to such terms as the department may determine are necessary and reasonable.~~]

§ 3-b. Long Island office of the department.

1. There is hereby established in the department an office to review and make recommendations with respect to the operations and terms and conditions of service of, and rates and budgets established by, the Long Island power authority and/or its service provider.

2. Definitions. As used or referred to in this section:

(a) "Authority" means the Long Island power authority.

(b) "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract. However, the service provider and any affiliate of the service provider with whom the authority or service provider contracts to provide services associated with the authority's electric transmission and distribution system shall not be considered an electric corporation under this chapter.

(c) "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the Long Island power authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

3. General powers. In undertaking the requirements of this section, subject to subdivisions (u) and (bb) through (hh) of section one thousand twenty-f of the public authorities law, the department shall be empowered and authorized to:

(a) Review and make recommendations to the board of the Long Island power authority with respect to the rates and charges, including charges related to energy efficiency and renewable energy programs, to be established by the authority and become applicable on or after January first, two thousand sixteen pursuant to subdivision (u) of section one thousand twenty-f of the public authorities law.

(i) The purpose of such review is to make recommendations designed to ensure that the authority and the service provider provide safe and adequate transmission and distribution service at rates set at the lowest level consistent with sound fiscal operating practices.

(ii) The department's recommendations shall be designed to be consistent with ensuring that the revenue requirements related to such rate review are sufficient to satisfy the authority's obligations with respect to its bonds, notes and all other contracts.

(iii) In the context of such review, the department may not make any recommendation that would modify the compensation or fee structure included within the operations services agreement.

(iv) In undertaking such review and in making recommendations related to the proposed rates and charges, the department shall establish standards,

policies and procedures that, at a minimum, provide for public statement and evidentiary hearings and participation of intervenors and other parties, and ensure that any final recommendations related to the proposed rates and charges are provided to the authority within two hundred forty days of the filing with the department of such plan.

(v) The parties to any such rate review proceeding shall include, but not be limited to, department staff, the authority, the service provider and, to the extent it deems necessary or appropriate, the utility intervention unit.

(b) Review the annual capital expenditures proposed by the service provider and recommend such improvement in the manufacture, conveying, transportation, distribution or supply of electricity, or in the methods employed by the service provider as in the department's judgment allows for safe and adequate service.

(c) Annually review the emergency response plan of the authority and the service provider in accordance with the following requirements:

(i) Examine and determine whether the emergency response plan is consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of this chapter and any regulations or orders promulgated thereto, and to recommend amendments of same; and

(ii) Review and make recommendations to the authority with respect to the performance of the service provider in restoring service or otherwise meeting the requirements of the emergency response plan during an emergency event, defined for purposes of this section as an event where widespread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and its service provider, including making determinations with respect to whether the service provider is reasonably able to implement the emergency response plan, whether the length of any outages related to such emergency were materially longer than they would otherwise have been because the service provider failed to reasonably implement the emergency response plan, the reasonableness of costs associated with such emergency response, the costs, if any, that were unreasonably and imprudently incurred by the service provider, and whether the service provider would be liable for any such costs pursuant to the terms and conditions of the operations services agreement.

(d) Upon notification to the Long Island power authority, undertake a comprehensive and regular management and operations audit of the authority and service provider pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law. The department shall have discretion to have such an audit performed by its staff, or by an independent contractor. In every case in which an audit is required pursuant to subdivision (bb) of section one thousand twenty-f of the public authorities law performed by an independent auditor, the department shall have the authority to select the auditor, and to require the authority to enter into a contract with the auditor that is consistent with the contracting-related requirements specified in subdivision nineteen of section sixty-six of this chapter and the requirements of subdivision (bb) of section one thousand twenty-f of the public authorities law. Such contract shall provide further that the auditor shall work for and under the direction of the department

according to such terms as the department may determine are necessary and reasonable.

(e) Accept, investigate, mediate to resolve and make recommendations to the Long Island power authority and/or the service provider regarding the resolution of complaints from consumers in the authority's service

territory relating to, among other things, the provision of electric service provided by the service provider and/or the authority.

(f) Review the net metering program implemented under subdivision (h) of section one thousand twenty-g of the public authorities law and make recommendations designed to ensure consistency with the requirements of sections sixty-six-j and sixty-six-l of this chapter, and any regulations and orders adopted thereto.

(g) Review and make recommendations with respect to any proposed plan submitted by the Long Island power authority and/or the service provider related to implementation of energy efficiency measures, distributed generation or advanced grid technology programs having the purpose of providing customers with tools to more efficiently and effectively manage their energy usage and utility bills, and improving system reliability and power quality.

(h) Review the data, information and reports submitted pursuant to subdivision (hh) of section one thousand twenty-f of the public authorities law and other pertinent information related to the metrics in the operations services agreement, the Long Island power authority's evaluation of such data, information and reports, and make recommendations to the authority with respect to the service provider's annual incentive based compensation within thirty days of receipt of such evaluation and information.

4. Review and inspection. To undertake the requirements of subdivision two of this section, the department shall be authorized to inspect all premises and facilities owned or operated by the authority and the service provider, review all books and records of the authority and the service provider, interview all appropriate personnel, and require annual reporting consistent with the requirements of subdivision six of section sixty-six of this chapter and any regulations and orders adopted thereto; provided, however, that this authority shall not extend to affiliates of the service provider.

§ 2. Subdivision 2 and paragraph (b) of subdivision 6 of section 18-a of the public service law, subdivision 2 as amended by section 2 of part NN of chapter 59 of the laws of 2009 and paragraph (b) of subdivision 6 as amended by section 1 of part BB of chapter 59 of the laws of 2013, are amended and a new subdivision 1-a is added to read as follows:

1-a. All costs and expenses of the department related to the department's responsibilities under section three-b of this chapter shall be paid pursuant to appropriation on the certification of the chairman of the department and upon the audit and warrant of the comptroller. For the state fiscal year beginning on April first, two thousand fourteen and each state fiscal year thereafter, payments are to be made from all moneys collected from the Long Island power authority pursuant to this section. The total of such costs and expenses shall be assessed on such authority in the manner provided in subdivisions two, three and four of this section.

2. (a) The chairman of the department shall estimate prior to the start of each state fiscal year the total costs and expenses, including the compensation and expenses of the commission and the department, their officers, agents and employees, and including the cost of retirement contributions, social security, health and dental insurance, survivor's benefits, workers' compensation, unemployment insurance and other fringe

benefits required to be paid by the state for the personnel of the commission and the department, and including all other items of maintenance and operation expenses, and all other direct and indirect costs. Based on such estimates, the chairman shall determine the amount

to be paid by each assessed public utility company **and the Long Island power authority** and a bill shall be rendered to each such public utility company **and authority**.

(b) The bill for each public utility company **and the Long Island power authority** shall be rendered on or before February first preceding each fiscal year, and shall be for the amount equal to the product of the aforesaid estimated costs and expenses of conducting the department's and commission's total operations during the fiscal year for which billing is being made multiplied by the proportion which compares:

(1) the gross operating revenues, over and above five hundred thousand dollars, for that utility company **or the authority** derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman, to:

(2) the total of the gross operating revenues, derived from intrastate utility operations for all utility companies **and the authority** in the state which revenues are included under subparagraph one of this paragraph.

For the purposes of calculating the commodity cost component of its gross operating revenue, where the utility delivers to end-use customers electricity and/or natural gas commodities that are sold to such customers by a third party, such utility shall include in its revenues an estimate of the sales revenue for the electric and/or natural gas commodities that it delivers, including all such commodities sold to end-use customers by third parties, in such manner as to assure that all end-use delivery customers, regardless of the entity from which they purchase their electric and/or natural gas commodities, bear a fair and proportionate share of the assessment imposed herein, as the commission may determine.

(c) The minimum assessment for any utility company**, as well as the Long Island power authority,** whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

(d) The amount of such bill for fiscal years beginning on or after April first, nineteen hundred eighty-three so rendered shall be paid by such public utility company **and such authority** to the department on or before April first; provided, however, that [~~a~~] **any such** utility company **or such authority** may elect to make partial payments for such costs and expenses on March tenth of the preceding fiscal year and on September tenth of such fiscal year. Each such partial payment shall be a sum equal to fifty percentum of the estimate of costs and expenses to be assessed against such utility company **or authority** under the provisions of this subdivision and shall not be less than two hundred dollars.

(e) During the course of any state fiscal year, the chairman may increase or decrease the estimate of costs and expenses. In such case, revised bills shall be sent to each public utility company **and such authority**, and such increase or decrease shall be equally apportioned against the remaining payments for such fiscal year.

(f) On or before October tenth of each year, the chairman shall compute the actual costs and expenses of the department and the commission and adjustments or other corrections as needed for the preceding state fiscal year and, after deducting the amounts recovered pursuant to subdivisions three and four of this section, shall, on or before October twentieth, send to each public utility company **and/or the authority** affected thereby a

statement setting forth the amount due and payable by, or the amount standing to the credit of, such public utility company **and/or the authority**. Any amount owing by any public utility company

and/or the authority shall be paid not later than thirty days following the date such statement is received. Any such amount standing to the credit of any public utility company shall be refunded by the commission or, at the option of such utility company, shall be applied as a credit against any succeeding payment due.

(g) The total amount which may be charged to any public utility company **and the Long Island power authority** under authority of this subdivision for any state fiscal year shall not exceed one per centum of such public utility company's **or authority's** gross operating revenues derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman; provided, however, that no corporation or person that is subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the general assessment provided for under this subdivision.

Notwithstanding the provisions of subdivision one of this section, for telephone corporations as defined in subdivision seventeen of section two of this article, the total amount which may be charged such corporations for department expenses under the authority of subdivision one of this section for any state fiscal year shall not exceed one-third of one percentum of such corporation's gross operating revenue, over and above five hundred thousand dollars, derived from intrastate utility operations in the last preceding calendar year, or other twelve month period as determined by the chairman.

(h) On-bill recovery charges billed pursuant to section sixty-six-m of this chapter shall be excluded from any determination of an entity's gross operating revenues derived from intrastate utility operations for purposes of this section.

(b) The temporary state energy and utility service conservation assessment shall be based upon the following percentum of the utility entity's gross operating revenues derived from intrastate utility operations in the last preceding calendar year, minus the amount, if any, that such utility entity is assessed pursuant to subdivisions one and two of this section for the corresponding state fiscal year period: (1) two percentum for the state fiscal year beginning April first, two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) one and three-quarters percentum for the state fiscal year beginning April first, two thousand fifteen; and (3) one and one-half percentum for the state fiscal year beginning April first, two thousand sixteen. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, utility entities shall make a payment equal to one-half of the assessment paid by such entities pursuant to this paragraph for the state fiscal year beginning on April first, two thousand sixteen. With respect to the Long Island power authority, the temporary state energy and utility service conservation assessment shall be based upon the following percentum of such authority's gross operating revenues derived from intrastate utility operations in the last preceding calendar year**, minus the amount, if any, that such authority is assessed pursuant to subdivisions one-a and two of this section for the corresponding state fiscal year period**: (1) one percentum for the state fiscal year beginning April first,

two thousand thirteen and the state fiscal year beginning April first, two thousand fourteen; (2) three- quarters of one percentum for the state fiscal year beginning April

first, two thousand fifteen; and (3) one-half percentum for the state fiscal year beginning April first, two thousand sixteen**; provided, however, that should the amount assessed by the department for costs and expenses pursuant to such subdivisions equal or exceed such authority's temporary state energy and utility service conservation assessment for a particular fiscal year, the amount to be paid under this subdivision by such authority shall be zero**. With respect to the temporary state energy and utility service conservation assessment to be paid for the state fiscal year beginning April first, two thousand seventeen and notwithstanding clause (i) of paragraph (d) of this subdivision, on or before March tenth, two thousand seventeen, the Long Island power authority shall make a payment equal to one-half of the assessment it paid for the state fiscal year beginning on April first, two thousand sixteen. No corporation or person subject to the jurisdiction of the commission only with respect to safety, or the power authority of the state of New York, shall be subject to the temporary state energy and utility service conservation assessment provided for under this subdivision. Utility entities whose gross operating revenues from intrastate utility operations are five hundred thousand dollars or less in the preceding calendar year shall not be subject to the temporary state energy and utility service conservation assessment. The minimum temporary state energy and utility service conservation assessment to be billed to any utility entity whose gross revenues from intrastate utility operations are in excess of five hundred thousand dollars in the preceding calendar year shall be two hundred dollars.

§ 3. Section 1020-b of the public authorities law is amended by adding two new subdivisions 23 and 24 to read as follows:

23. "Service provider" means the entity under contract with the authority to provide management and operation services associated with the authority's electric transmission and distribution system and any subsidiary of such entity that provides such services under contract.

24. "Operations services agreement" means an agreement and any amendments thereto between the Long Island lighting company dba LIPA or the authority and the service provider to provide management and operation services associated with the authority's electric transmission and distribution system.

§ 4. Section 1020-d of the public authorities law, as added by chapter 506 of the laws of 1995, is amended to read as follows:

§ 1020-d. [~~Trustees~~] **Board of trustees**.

1. [~~The~~] **Starting on January first, two thousand fourteen, the board of the** authority shall **be constituted and** consist of [~~fifteen~~] **nine** trustees all of whom shall be residents of the service area, [~~nine~~] **five** of whom shall be appointed by the governor, one of whom the governor shall designate as [~~chairman~~] **chair**, and serve at his **or her** pleasure, [~~three~~] **two** of whom shall be appointed by the temporary president of the senate, and [~~three~~] **two** of whom shall be appointed by the speaker of the assembly. [~~Two~~] **One** of the governor's appointees shall serve an initial term of [~~one year~~] **two years**; [~~two~~] **one** of the governor's appointees shall serve an initial term of [~~two~~] **three** years; [~~two~~] **and three** of the governor's appointees shall serve an initial term of [~~three~~] **four** years[~~; and three of the governor's appointees shall serve an initial term of four years~~]. [~~Two~~] **One** of the appointees of the temporary president of the senate and [~~two~~] **one** of the appointees of the speaker of the assembly shall serve initial terms of [~~one year~~] **two years**;

and one appointee of the temporary president of the senate and one appointee of the speaker of the assembly shall serve initial terms of [~~two~~] **three** years. Thereafter, all terms

shall be for a period of four years. In the event of a vacancy occurring in the office of trustee by death, resignation or otherwise, the respective appointing officer shall appoint a successor who shall hold office for the unexpired portion of the term.

2. No trustee shall receive a salary, but each shall be entitled to reimbursement for reasonable expenses in the performance of duties assigned hereunder.

3. Notwithstanding the provisions of any other law, no trustee, officer or employee of the state, any state agency or municipality appointed a trustee shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of a trusteeship on the authority, his or her service thereon or his or her employment therewith.

4. All trustees appointed under this section shall have relevant utility, corporate board or financial experience.

§ 5. On or before December 1, 2013 the governor, the temporary president of the senate and the speaker of the assembly shall choose and announce their appointments to the board of the Long Island power authority to be made pursuant to section 1020-d of the public authorities law, as amended by section four of this act, giving due consideration to continuity of business. The board of trustees of the Long Island power authority in existence on December 31, 2013, shall be abolished on such date and be constituted on January 1, 2014 pursuant to section 1020-d of the public authorities law, as amended by section four of this act.

§ 6. Subdivision (u) of section 1020-f of the public authorities law is REPEALED.

§ 7. Subdivisions (c) and (bb) of section 1020-f of the public authorities law, subdivision (c) as amended by chapter 506 of the laws of 2009 and subdivision (bb) as added by chapter 8 of the laws of 2012, are amended and seven new subdivisions (u), (cc), (dd), (ee), (ff), (gg) and (hh) are added to read as follows:

(c) To appoint officers, agents and employees, without regard to any personnel or civil service law, rule or regulation of the state and in accordance with guidelines adopted by the authority, prescribe their duties and qualifications and fix and pay their compensation [~~**, provided, however, that the appointment of the chief executive officer shall be subject to confirmation by the senate in accordance with section twenty-eight hundred fifty-two of this chapter;**~~]**. By January first, two thousand fourteen, the authority, through its governance committee, shall amend such guidelines to require that staffing at the authority is kept at levels only necessary to ensure that the authority is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and oversee the activities of the service provider**;

(u) Rate plans. Subject to subdivision six of section one thousand twenty-k of this title to fix rates and charges for the furnishing or rendition of gas or electric power or of any related service at the lowest level consistent with sound fiscal and operating practices of the authority and which provide for safe and adequate service. In implementing this power:

1. The authority and the service provider shall, on or before February first, two thousand fifteen, submit for review to the department of public service a three-year rate proposal for rates and charges to take effect on or after January first, two thousand sixteen.

2. The authority and the service provider shall thereafter submit for review to the department of public service any rate proposal that would increase the rates and charges and thus increase the aggregate revenues of the authority by more than two and one-half percent to be measured on an annual basis; provided, however, that the authority may place such rates and charges into effect on an interim basis, subject to prospective rate adjustment; provided, further, that a final rate plan issued by the authority that would not so increase such rates and charges shall not be subject to the requirements of paragraph four of this subdivision and shall be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The authority and/or the service provider may otherwise submit for review to such department any rate proposal irrespective of its effect on revenues.

3. The authority shall not fix any final rates and charges proposed that would not be subject to review by the department of public service pursuant to paragraphs one and two of this subdivision until after holding public hearings thereon upon reasonable public notice, with at least one such hearing to be held each in the county of Suffolk and the county of Nassau.

4. Any recommendations associated with a rate proposal submitted pursuant to paragraphs one and two of this subdivision shall be provided by the department of public service to the board of the authority immediately upon their finalization by the department. Unless the board of the authority makes a preliminary determination in its discretion that any particular recommendation is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligations, or the provision of safe and adequate service, the board shall implement such recommendations as part of its final rate plan and such final determination shall be deemed to satisfy the requirements of this subdivision and be considered final for the purposes of review under article seventy-eight of the civil practice law and rules. The board shall make any such preliminary determination of inconsistency within thirty days of receipt of such recommendations, with notice and the basis of such determination being provided to the department of public service, and contemporaneously posted on the websites of the authority and its service provider. The board shall thereafter, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency.

At such hearing, the department of public service shall present the basis for its recommendations, the board shall present the basis for its determination of inconsistency and the service provider may present its position. The authority and the service provider may, during the time period before such public hearing reach agreement with the department on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementation with respect to any such recommendations. The authority's final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(bb) Comprehensive and regular management and operations audits.

1. The authority **and the service provider** shall cooperate in the undertaking and completion of a regular and comprehensive management and operations audit conducted pursuant to the requirements of this subdivision and [~~subdivision two of section three~~] **paragraph (d) of subdivision three of section three-b** of the public service law. Such audit shall review and evaluate the [~~authority's~~] overall operations and management

of the authority and service provider, including [~~the authority's~~] such operations and management in the context of [~~its~~] the authority's duty to set rates at the lowest level consistent with standards and procedures provided in subdivision (u) of this section, and include, but not be limited to: (i) the [~~authority's~~] service provider's construction and capital program planning in relation to the needs of [~~its~~] customers for reliable service; (ii) the overall efficiency of the authority's and service provider's operations; (iii) the manner in which the authority is meeting its debt service obligations; (iv) the authority's Fuel and Purchased Power Cost Adjustment clause and recovery of costs associated with such clause; (v) the authority's and service provider's annual budgeting procedures and process; (vi) the application, if any, of the performance metrics designated in the operations services agreement and the accuracy of the data relied upon with respect to such application; and [~~(vi)~~] (vii) the authority's compliance with debt covenants.

2. The department of public service shall notify the authority that said department is in the process of initiating a comprehensive management and operations audit as described in paragraph one of this subdivision in a manner that ensures the timeliness of such audit, and in accordance with the following timeframe: the first comprehensive management and operations audit shall be initiated as of the effective date of [~~this subdivision~~] chapter eight of the laws of two thousand twelve and undertaken in a manner and to an extent that is practicable in the context of the authority's transition to a new management service structure; the second comprehensive management and operations audit shall be initiated no later than December fifteenth, two thousand [~~fifteen~~] sixteen; and all additional comprehensive management and operations audits shall be initiated at least once every five years thereafter.

Within a reasonable time after such notification to the authority, said department or the independent auditor retained by the authority to undertake such audit shall hold public statement hearings, with proper notice, in both Nassau and Suffolk counties for the purpose of receiving both oral and written comments from the public on matters related to such audit as described in paragraph one of this subdivision.

3. Each such audit shall be completed within eighteen months of initiation absent an extension for good cause shown by the department of public service or the independent auditor under contract with the authority with notice of such extension to the governor, the temporary president of the senate, the speaker of the assembly, and the chairs of the authority and the department of public service. Such audit shall be provided to the board of the authority immediately upon its completion.

The department of public service shall provide notice of completion of such audit to the governor, the temporary president of the senate, the speaker of the assembly, and the minority leaders of the senate and assembly, and the authority, upon receipt of such audit, shall post a copy of such audit, including findings and recommendations, on its website and the website of the service provider. Unless the board of the authority makes a preliminary determination that any particular finding or recommendation contained in such audit is inconsistent with the authority's sound fiscal operating practices, any existing contractual or operating obligation, or the provision for safe and adequate service, the board shall implement or cause its service provider to implement such findings and recommendations in accordance with the timeframe specified under such audit.

4. The board of the authority shall make any preliminary determination of inconsistency with respect to any such finding or recommendation

within thirty days of receipt of the audit, with notice and the basis of such determination being provided to the department of public service.

Such notice and basis shall be posted contemporaneously on the authority's website **and the website of the service provider** and the board shall, within thirty days of such posting and with due advance notice to the public, hold a public hearing with respect to its preliminary determination of inconsistency. At such hearing the department of public service or the independent auditor responsible for undertaking such audit shall present the basis for its findings and recommendations and the board shall present the basis for its determination of inconsistency **and the service provider may present is position**. The authority**, service provider** and auditor may during the time period prior to such public hearing reach agreement on disputed issues. Within thirty days after such public hearing, the board of the authority shall announce its final determination and planned implementations with respect to any such findings and/or recommendations. The [~~**board's**~~] **authority's** final determination of inconsistency shall be subject to any applicable judicial review proceeding, including review available under article seventy-eight of the civil practice law and rules.

(cc) To prepare an emergency response plan pursuant to this subdivision. 1. The service provider shall, in consultation with the authority, prepare and maintain an emergency response plan (i) to assure the reasonably prompt restoration of service in the case of an emergency event, defined for purposes of this subdivision as an event where wide-spread outages have occurred in the authority's service territory due to a storm or other causes beyond the control of the authority and the service provider, (ii) consistent with the requirements of paragraph (a) of subdivision twenty-one of section sixty-six of the public service law and any regulations and orders adopted thereto, and (iii) establishing the separate responsibilities of the authority and service provider.

2. On or before February third, two thousand fourteen, the authority and service provider shall submit an emergency response plan to the department of public service for review. Contemporaneously with such submission, the authority shall provide notice of such proposed plan to the secretary of state for publication in the state register, the authority and service provider each shall post such plan on their websites and otherwise make such plan available for review in-person, and afford members of the public an opportunity to submit written comments and oral comments pursuant to at least one hearing to be held each in the county of Suffolk and the county of Nassau. Such written comments must be submitted by March fourteenth, two thousand fourteen.

The authority and service provider shall provide a copy of all written comments they receive and a transcript of such public hearings to the department of public service for its consideration in reviewing the emergency response plan. The department shall provide any recommendations to the authority and service provider with respect to such plan on or before April fifteenth, two thousand fourteen. Such plan must be made final by June second, two thousand fourteen. For each year thereafter, the service provider shall submit an emergency response plan to the department of public service, and such department shall provide its recommendations, in accordance with a schedule to be established by such department and that is consistent with the schedule associated with such department's review of similar such plans provided by electric corporations pursuant to subdivision twenty-one of section sixty-six of the public service law.

3. By June second, two thousand fourteen, and by June first annually thereafter, the authority and service provider shall jointly certify to the department of homeland security and emergency services that the emergency response plan ensures, to the greatest extent feasible, the timely and safe restoration of energy services after an emergency consistent with the requirements of paragraph (a) of subdivision twenty-one of the public service law and the department's recommendations. The filing of such emergency response plan shall also include a copy of all written mutual assistance agreements among utilities. The authority and service provider shall file with the county executives of Nassau and Suffolk county and the mayor of the city of New York the most recent version of the emergency response plan, and make sure that such amended versions are timely filed.

4. Starting in calendar year two thousand fourteen, the service provider annually shall undertake at least one drill to implement procedures to practice its emergency response plan. The service provider shall notify and allow participation in such drill of all appropriate municipal emergency responders and officials.

5. If, during an emergency event, electric service is not restored in three days, the service provider shall within sixty days from the date of full restoration file with the department a report constituting a review of all aspects of the preparation and system restoration performance during the event, and shall thereafter take into consideration any recommendations made by the department associated with such review.

(dd) On or before January first, two thousand fifteen, and by January first of each calendar year thereafter, to submit for review to the department of public service a report detailing the service provider's planned capital expenditures.

(ee) On or before July first, two thousand fourteen, and annually thereafter, to submit for review to the department of public service any proposed plan related to implementing energy efficiency measures, distributed generation or advanced grid technology programs for the purpose provided pursuant to paragraph (g) of subdivision three of section three-b of the public service law.

(ff) To assist and cooperate with the department of public service with respect to any review undertaken pursuant to section three-b of the public service law, including providing the department with reasonable access to all facilities and premises owned or operated by the authority or its service provider, allowing review of all books and records of the authority and its service provider, providing copies of requested documents, allowing interviews of all appropriate personnel, and responding in a reasonable and timely manner to any inquiries or reporting requests made by the department; provided, however, that the obligations set forth in this subdivision shall not extend to affiliates of the service provider.

(gg) Renewable generation and energy efficiency programs. 1. The authority in coordination with the service provider, the power authority of the state of New York and the New York state energy research and development authority shall, to the extent the authority's rates are sufficient to provide safe and adequate transmission and distribution service, and the measures herein, undertake actions to design and administer renewable energy and energy efficiency measures in the service area, with the goal of continuing and expanding such measures that cost-effectively reduce system-wide peak demand, minimize long-term fuel price risk to rate payers, lower emissions, improve environmental quality, and seek to meet New York state climate change and environmental

goals. Such actions shall also include implementation of any renewable energy competitive procurement or feed-in-tariff programs that were approved by the authority as of the effective date of the chapter of the laws of two thousand thirteen which added this subdivision.

2. The service provider shall consider, consistent with maintaining system reliability, renewable generation and energy efficiency program results and options in establishing capital plans.

(hh) Starting in calendar year two thousand fifteen, the authority and the service provider shall submit to the department of public service for review, any and all data, information and reports which set forth the service provider's actual performance related to the metrics in the operations services agreement, including the authority's evaluation thereof, no less than forty-five days prior to the authority's determination of the service provider's annual incentive compensation.

§ 8. Section 1020-q of the public authorities law, as added by chapter 517 of the laws of 1986 and subdivision 2 as amended by section 19 of part Y of chapter 63 of the laws of 2000, is amended to read as follows:

§ 1020-q. Payments in lieu of taxes. 1. Each year after property theretofore owned by LILCO is acquired by the authority by any means authorized by this title and, as a consequence, is removed from the tax rolls, the authority shall make payments in lieu of taxes to municipalities and school districts equal to the taxes and assessments which would have been received from year to year by each such jurisdiction if such acquisition had not occurred, [~~except for such taxing jurisdictions which tax the Shoreham plant,in which case the in lieu of tax payments shall in the first year after the acquisition be equal to one hundred percent of the taxes and assessments which would have been received by such taxing jurisdictions. In each succeeding year such in lieu of tax payments shall be decreased by ten percent until such time as such payments equal taxes and assessments which would have been levied on such plant in a nonoperative state~~] provided, however, that for the calendar year starting on January first, two thousand fifteen, and for each calendar year thereafter, such payments in lieu of taxes shall not exceed the in lieu of tax payments made to such municipalities and school districts in the immediately preceding year by more than two percent.

2. The authority shall also make payments in lieu of taxes for those taxes which would otherwise be imposed [~~upon LILCO, if LILCO were to continue in operation,~~] pursuant to sections one hundred eighty-six-a and one hundred eighty-six-c of the tax law, and to former [~~sections one hundred eighty-six and~~] section one hundred eighty-six-b of the tax law as such [~~sections one hundred eighty-six and one hundred eighty-six-b were~~] section was in effect on December thirty-first, nineteen hundred ninety-nine, [~~paragraph (b) of subdivision four of section one hundred seventy-four of the navigation law,~~] and any taxes imposed by a city pursuant to the authorization granted by section twenty-b of the general city law.

3. No municipality or governmental subdivision, including a school district or special district, shall be liable to the authority or any other entity for a refund of property taxes originally assessed against the Shoreham plant. Any judicial determination that the Shoreham plant assessment was excessive, unequal or unlawful for any of the years from nineteen hundred seventy-six to the effective date of this title shall not result in a refund by any taxing jurisdiction of taxes previously paid by LILCO pursuant to such Shoreham plant assessment. The authority shall discontinue and abandon all proceedings, brought by its predecessor

in interest, which seek the repayment of all or part of the taxes assessed against the Shoreham plant.

§ 9. Subdivision 1 of section 1020-s of the public authorities law, as amended by chapter 388 of the laws of 2011, is amended to read as follows:

1. The rates, services and practices relating to the electricity generated by facilities owned or operated by the authority shall not be subject to the provisions of the public service law or to regulation by, or the jurisdiction of, the public service commission, except to the extent (a) article seven of the public service law applies to the siting and operation of a major utility transmission facility as defined there-in, (b) article ten of such law applies to the siting of a generating facility as defined therein, [~~and~~] (c) section eighteen-a of such law provides for assessment for certain costs, property or operations**, and (d) to the extent that the department of public service reviews and makes recommendations with respect to the operations and provision of services of, and rates and budgets established by, the authority pursuant to section three-b of such law**.

§ 10. Section 1020-w of the public authorities law, as added by chapter 517 of the laws of 1986, is amended to read as follows:

§ 1020-w. Audit and annual reports. The accounts of the authority shall be subject to the supervision of the state comptroller and an annual audit shall be performed by an independent certified accountant selected by the [~~state division of the budget~~] **authority, upon recommendation of its finance and audit committee**. The authority shall submit annually to the governor, the state comptroller, the temporary president of the senate, the speaker of the assembly and the county executives and governing bodies of the counties of Suffolk and Nassau, a detailed report pursuant to the provisions of section two thousand eight hundred of [~~title one of article nine of~~] this chapter, which report shall be verified by the chairman of the authority. The authority shall comply with the provisions of sections two thousand eight hundred one, two thousand eight hundred two and two thousand eight hundred three of [~~title one of article nine of~~] this chapter.

§ 11. Section 1020-cc of the public authorities law, as amended by chapter 413 of the laws of 2011, is amended to read as follows:

§ 1020-cc. Authority subject to certain provisions contained in the state finance law, the public service law, the social services law and the general municipal law.

1. All contracts of the authority shall be subject to the provisions of the state finance law relating to contracts made by the state. The authority shall also establish rules and regulations with respect to providing to its residential gas, electric and steam utility customers those rights and protections provided in article two and sections one hundred seventeen and one hundred eighteen of the public service law and section one hundred thirty-one-s of the social services law. The authority shall conform to any safety standards regarding manual lockable disconnect switches for solar electric generating equipment established by the public service commission pursuant to subparagraph (ii) of paragraph (a) of subdivision five and subparagraph (ii) of paragraph (a) of subdivision five-a of section sixty-six-j of the public service law. The authority shall let contracts for construction or purchase of supplies, materials, or equipment pursuant to section one hundred three and paragraph (e) of subdivision four of section one hundred twenty-w of the general municipal law.

2. The authority and service provider shall provide to the state comptroller on March thirty-first and September thirtieth of each year a

report documenting each contract in excess of two hundred fifty thousand dollars per year entered into with a third party and related to management

and operation services associated with the authority's electric transmission and distribution system, including the name of the third party, the contract term and a description of services or goods to be procured, and post such report on each of their websites. All contracts entered into between the service provider and third parties are not subject to the requirements of subdivision one of this section.

§ 12. Paragraph (b) of subdivision 4 of section 94-a of the executive law, as amended by chapter 8 of the laws of 2012, is amended to read as follows:

(b) The utility intervention unit shall have the power and duty to:

(i) on behalf of the secretary, initiate, intervene in, or participate in any proceedings before the public service commission **or the department of public service**, to the extent authorized by sections **three-b,** twenty-four-a, seventy-one, eighty-four or ninety-six of the public service law or any other applicable provision of law, where he or she deems such initiation, intervention or participation to be necessary or appropriate;

(ii) represent the interests of consumers of the state before federal, state and local administrative and regulatory agencies engaged in the regulation of energy services; [~~and~~]

(iii) accept and investigate complaints of any kind from Long Island power authority consumers, attempt to mediate such complaints where appropriate directly with such authority and refer complaints to the appropriate state or local agency authorized by law to take action with respect to such complaints[~~.~~]**; and**

(iv) hold regular forums in each of the service territories of the combination gas and electric corporations, as defined under section two of the public service law, and the Long Island power authority to educate consumers about utility-related matters and the regulatory process, opportunities to lower energy costs, including through energy efficiency and distributed generation, and other matters affecting consumers.

§ 13. Notwithstanding section 112 of the state finance law and notwithstanding any other provision of law to the contrary, including but not limited to any provision of law related to rebidding, letting or amending contracts of any amount, the Long Island Lighting Company dba LIPA is authorized to amend the operations services agreement, dated December 28, 2011, entered into with PSEG Long Island LLC, including Amendment Nos. 1 and 2 thereto, approved on June 27, 2012, solely by the following: (1) upon review and written recommendations made by the department of public service to the board of trustees of the Long Island power authority ("authority"), setting forth the reasons for and findings underlying such recommendations; and (2) adoption of a resolution by a majority of the authority's board of trustees.

§ 14. This act shall supersede the fifth project condition established in Resolution No. 97-LI-1 of the public authorities control board, dated July 16, 1997, related to the implementation of certain rate increases.

§ 15. Subdivision l of section 7208 of the education law, as amended by chapter 994 of the laws of 1971, is amended to read as follows:

l. The practice of engineering or land surveying, or using the title "engineer" or "surveyor" **(i)** exclusively as an officer or employee of a public service corporation by rendering to such corporation such services in connection with its lines and property which are subject to supervision with respect to the safety and security thereof by the

public service commission of this state, the interstate commerce commission or other federal regulatory body and so long as such person is thus actually and exclusively employed and no longer**, or (ii) exclusively as an officer or**

employee of the Long Island power authority or its service provider, as defined under section three-b of the public service law, by rendering to such authority or provider such services in connection with its lines and property which are located in such authority's service area and so long as such person is thus actually and exclusively employed and no longer;

§ 16. Repowering. If after the Long Island power authority, or its successor, determines, in accordance with the terms and conditions contained in the amended and restated power supply agreement ("A&R PSA"), dated October 10, 2012, between the authority and the owner of the legacy LILCO power generating facilities, that repowering any such generating facility is in the best interests of its ratepayers and will enhance the authority's ability to provide a more efficient, reliable and economical supply of electric energy in its service territory, consistent with the goal of improving environmental quality, the authority will exercise its rights under the A&R PSA related to repowering such facility, and shall enter into an agreement related to payments in lieu-of-taxes for a term commensurate with any power purchase agreement entered into related to such repowered facility, consistent with other such agreements related to generating facilities under contract to the authority in the service territory.

§ 17. This act shall take effect January 1, 2014; provided, however, that section twelve of this act shall take effect April 1, 2014, sections five, ten, eleven, thirteen, fourteen, fifteen and sixteen of this act shall take effect immediately; provided further that section thirteen of this act shall expire and be deemed repealed January 1, 2015; and provided further that the amendments to subdivision 6 of section 18-a of the public service law made by section two of this act shall not affect the repeal of such subdivision and shall be deemed repealed therewith.

PART B

Section 1. Legislative findings. The legislature hereby finds and determines:

1. On May 28, 1998, Long Island Power Authority (the authority) acquired all the capital stock and associated assets, including transmission and distribution (T&D) system assets of Long Island Lighting Company (LILCO) which does business as the retail electric utility on Long Island, New York under the name of LIPA. In connection with that acquisition, the authority took over ultimate responsibility for providing electric utility service to residential, commercial, industrial, nonprofit and governmental customers in the counties of Suffolk and Nassau and a portion of the county of Queens (hereinafter referred to as the "service area"). Such acquisition effectively converted LILCO from an investor-owned utility that was comprehensively regulated by the New York Public Service Commission (PSC) and the United States Federal Energy Regulatory Commission (FERC), to a municipal utility that is not comprehensively regulated either by the PSC or FERC.

2. Since May 28, 1998, neither the authority nor LIPA has directly operated or maintained the T&D system assets, provided electric service or billed and collected T&D rates from LIPA's customers; instead, the authority and LIPA have contracted out virtually all of these activities

to other companies. Most of these operations and service responsibilities have been contracted out to affiliates of a company now known as National Grid plc (National Grid), a multi-national electric and gas utility company organized under the laws of England and Wales pursuant to a management services agreement. Thus, while the LIPA name appears on customer bills as well as on service trucks and other equipment used in the service area,

affiliates of National Grid have been principally in charge of management and operation of the T&D system assets and providing electricity to consumers in the service area. The authority and LIPA have now contracted with affiliates of Public Service Enterprise Group and Lockheed Martin Services Inc. (PSEG-Lockheed) to provide operation and maintenance services for the T&D system assets for ten years starting January 1, 2014, when the National Grid contract expires.

3. High costs of electric utility service poses a serious threat to the economic well-being, health and safety of the residents of and the commerce and industry in the service area. High costs of electric utility service deter commerce and industry from locating in the service area and have caused existing commerce and industry to consider seriously moving out of the service area.

4. High debt and associated debt service contribute to the authority's high electric rates. The authority has approximately seven billion dollars in outstanding debt, a substantial portion of which was issued to refinance debt associated with construction of the now abandoned Shoreham nuclear power plant. The annual debt service associated with such bonds puts pressure on the authority's customer rates.

5. As of December 31, 2012, the three major rating agencies generally rated the authority's debt in the single-A range, though Moody's Investors Services assigns approximately seven hundred million dollars of the authority's debt slightly lower ratings of Baa1 and Baa2.

6. If securitized restructuring bonds were issued by a bankruptcy-remote entity with a AAA or equivalent rating in current market conditions to finance a portion of the costs of purchasing, redeeming or defeasing outstanding debt of the authority, and other associated costs, the debt service on the authority's debt could be reduced and the costs of electric utility service could be lowered.

7. Securitized restructuring bonds are likely to be most attractive to the investing public and result in the lowest possible yields if they are issued by a newly organized, special purpose public benefit corporation or other corporate municipal instrumentality of the state.

8. The purpose of this act is to provide a legislative foundation for the issuance of securitized restructuring bonds to refinance outstanding debt of the authority, a significant portion of which relates to LILCO's costs of constructing and financing the now abandoned Shoreham nuclear power plant, including the creation of restructuring property by the authority to provide for the redemption or defeasance of a portion of the outstanding debt of the authority. It is the intent of the legislature to authorize, for the purpose of reducing electric utility costs to consumers in the service area, the following: (a) the organization of a restructuring bond issuer as a special purpose corporate municipal instrumentality of the state, created for the limited purpose of issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt of the authority and associated costs, which securitized restructuring bonds create no new financial obligations or liabilities for the authority or for the state; and (b) implementation of contracts with owners of the securitized restructuring bonds through a

statutory pledge and agreement that the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds until those bonds are no longer outstanding and all

amounts due and owing under the related transaction documents have been paid in full.

9. Accordingly, the issuance of securitized restructuring bonds is expected to result in lower aggregate distribution and transmission charges and transition charges, compared to other available alternatives.

§ 2. Definitions. As used or referred to in this act, unless a differing meaning clearly appears from the context:

1. "Ancillary agreement" means any bond insurance policy, letter of credit, reserve account, surety bond, swap arrangement, hedging arrangement, liquidity or credit support arrangement or other similar agreement or arrangement entered into in connection with the issuance of restructuring bonds that is designed to promote the credit quality and marketability of such restructuring bonds or to mitigate the risk of an increase in interest rates.

2. "Approved restructuring costs" means, to the extent approved as such under a restructuring cost financing order,

(a) costs of purchasing, redeeming or defeasing a portion of outstanding debt of the authority, including bonds and notes issued by the authority, debt issued by the New York state energy research and development authority for the benefit of the LILCO;

(b) costs of terminating interest rate swap contracts and other financial contracts entered into by or for the benefit of the authority and related to debt obligations of the authority;

(c) rebate, yield reduction payments and any other amounts payable to the United States Treasury or to the Internal Revenue Service to preserve or protect the federal tax-exempt status of outstanding debt obligations of the authority; and (d) upfront financing costs associated with restructuring bonds.

3. "Assignee" means any individual, corporation, limited liability company, partnership or limited partnership, trust or other legally-recognized entity to which an interest in restructuring property is assigned, sold or transferred, other than as security, including any assignee of that party.

4. "Authority" means Long Island Power Authority, a corporate municipal instrumentality and political subdivision of the state.

5. "Consumer" means any individual, governmental body, trust, business entity, nonprofit organization or other legally-recognized entity that takes electric delivery service within the service area by means of electric transmission or distribution facilities, whether those electric transmission or distribution facilities are owned by LIPA or any other entity.

6. "Financing cost" means the costs to issue, service, or repay restructuring bonds, whether incurred upon issuance of such restructuring bonds or over the life of the restructuring bonds, and approved for recovery in a restructuring cost financing order. Without limitation, "financing cost" may include, as applicable, any of the following:

(a) principal, interest and redemption premiums payable on restructuring bonds;

(b) any payment required under an ancillary agreement and any amount required to fund or replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds;

(c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and

(d) any cost related to issuing restructuring bonds, administering the restructuring bond issuer and servicing restructuring property and

restructuring bonds, or related to the efforts to prepare or obtain approval of a restructuring cost financing order, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, trustee fees and expenses, legal fees and expenses, accounting fees and expenses, administrative fees and expenses, placement fees, underwriting fees, fees and expenses of the authority's advisors and outside counsel, if any, rating agency fees and any other related cost that is approved for recovery in the restructuring cost financing order.

7. "Financing entity" means the restructuring bond issuer, the authority or any servicer, trustee, collateral agent, and other person or entity acting for the benefit of owners of the restructuring bonds, the restructuring bond issuer or the authority that may own restructuring property or have rights to receive proceeds of restructuring bonds or to receive proceeds from the sale of restructuring property.

8. "LIPA" means Long Island Lighting Company, currently doing business under the name of LIPA.

9. "Ongoing financing costs" means financing costs that are not upfront financing costs. Ongoing financing costs include: (a) principal, interest and redemption premiums payable on restructuring bonds; (b) any payment required under an ancillary agreement and any amount required to replenish a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to restructuring bonds; (c) any federal, state or local taxes, payments in lieu of taxes, franchise fees or license fees imposed on transition charge revenues; and (d) any cost related to administering the restructuring bond issuer and servicing restructuring property or restructuring bonds, including, without limitation, costs of calculating adjustments of transition charges, servicing fees and expenses, administrative fees and expenses, trustee fees and expenses, and legal fees and expenses, accounting fees and expenses, and rating agency fees, approved for recovery in the restructuring cost financing order. Ongoing financing costs shall include any excess of actual upfront financing costs over the estimate of upfront financing costs included in the principal amount of the restructuring bonds.

10. "Restructuring bond issuer" means the corporate municipal instrumentality of the state created under section four of this act.

11. "Restructuring bonds" means bonds or other evidences of indebtedness that are issued pursuant to an indenture or other agreement of the restructuring bond issuer under a restructuring cost financing order (a) the proceeds of which are used, directly or indirectly, to recover, finance, or refinance approved restructuring costs, (b) that are directly or indirectly secured by, or payable from, restructuring property, and (c) that have a term no longer than thirty years.

12. "Restructuring cost financing order" means an order by the authority, adopted in accordance with this act, which approves the imposition and collection of transition charges, and the financing of approved restructuring costs and upfront financing costs through the sale of restructuring property and the issuance of restructuring bonds, and which includes a procedure to require periodic adjustments to transition charges to ensure the collection of transition charges sufficient to

provide for the timely payment of scheduled debt service on the restructuring bonds and all other ongoing financing costs contemplated by the restructuring cost financing order.

13. "Restructuring property" means the property rights and interests created pursuant to this act, including, without limitation, the right, title, and interest: (a) in and to the transition charges established

pursuant to a restructuring cost financing order, as adjusted from time to time in accordance with the restructuring cost financing order; (b) in and to all revenues, collections, claims, payments, money, or proceeds of or arising from the transition charges or constituting transition charges that are the subject of a restructuring cost financing order, regardless of whether such revenues, collections, claims, payments, money, or proceeds are imposed, billed, received, collected or maintained together with or commingled with other revenues, collections, claims, payments, money or proceeds; and (c) in and to all rights to obtain adjustments to the transition charges pursuant to the terms of the restructuring cost financing order. Restructuring property shall constitute a vested, presently existing property right notwithstanding the fact that the value of the property right will depend on further acts that have not yet occurred, including but not limited to, consumers remaining or becoming connected to the T&D system assets and taking electric delivery service, the imposition and billing of transition charges, or, in those instances where consumers are customers of LIPA or any successor owner of the T&D system assets, such owner performing certain services.

14. "Service area" means the geographical area within which LIPA provided electric distribution services as of the implementation date of this act.

15. "Servicer" means an entity authorized and required, by contract or otherwise, to impose, bill and collect transition charges, to prepare periodic reports regarding billings and collections of transition charges, to remit collections to the appropriate financing entity, and to provide other services contemplated by the restructuring cost financing order, which may include calculation of periodic adjustments to the transition charges or providing other services related to the restructuring property. Without limitation, LIPA or any successor owner of the T&D system assets, their agents or subcontractors, or any entity authorized to bill and collect T&D rates may be a servicer.

16. "Servicing fee" means, except to the extent otherwise specified in a restructuring cost financing order, the periodic amount paid pursuant to a servicing agreement, indenture or other such document to a servicer of restructuring property which amount shall approximate the estimated incremental cost of imposing, billing and collecting transition charges, preparing servicing reports and performing other customary servicing services required in connection with securitized bonds. A restructuring cost financing order may authorize a smaller fee payable to a successor servicer that is affiliated with a successor owner of the T&D system assets if the incremental cost of providing servicing services is less than LIPA's incremental costs. A restructuring cost financing order may authorize a larger fee payable to a successor servicer that is not affiliated with the owner of the T&D system assets or is not performing similar services with respect to the base rates of the owner of the T&D system assets if such larger fee is reasonably necessary to employ a reliable successor servicer.

17. "Successor regulator" means a regulatory department, commission or other instrumentality or subdivision of the state with jurisdiction to

regulate the T&D rates of LIPA or its successor as owner of the T&D system assets.

18. "Third-party biller" means any person or entity authorized, required or entitled to bill or collect transition charges or T&D rates other than the authority, LIPA or a successor owner of the T&D system assets, or a servicer.

19. "T&D rates" means rates and charges for electric transmission and distribution services in the service area. "T&D rates" shall not include charges for the generation or resale of electricity or any charges imposed to fund public purpose programs.

20. "T&D system assets" means the physically integrated system of electric transmission and distribution facilities (and other general property and equipment used in connection therewith) owned by LIPA as of the effective date of this act or thereafter acquired for use by LIPA or its successors in providing retail electric utility service to consumers in the service area.

21. "Transition charges" means those rates and charges relating to the T&D system assets that are separate and apart from base rates of LIPA or any successor owner of the T&D system assets and that are authorized in a restructuring cost financing order to recover from consumers the principal, interest and premium payable on restructuring bonds and the other ongoing financing costs associated with the restructuring bonds. As provided in paragraph (c) of subdivision 5 of section five of this act, transition charges shall be imposed on all consumers in the service area and collected by LIPA or any successor owner of the T&D system assets, their agents, subcontractors, assignees, collection agents or any other entity designated under the restructuring cost financing order.

22. "Upfront financing costs" means the fees and expenses to issue restructuring bonds, including, without limitation, expenses associated with the efforts to prepare or obtain approval of a restructuring cost financing order, as well as the fees and expenses associated with the structuring, marketing, and issuance of restructuring bonds, including, without limitation, counsel fees, structural advisory fees, underwriting fees and original issue discount, rating agency and trustee fees (including fees of trustee's counsel), accounting and auditing fees, printing and marketing expenses, stock exchange listing fees and compliance fees, filing fees, any applicable taxes, payments in lieu of taxes, the amount required to fund a debt service reserve account or other account established under any indenture, ancillary agreement or other financing document relating to the restructuring bonds, and fees and expenses of the authority's advisors and outside counsel, if any. Upfront financing costs include reimbursement to any person of amounts advanced for payment of such costs. Upfront financing costs do not include scheduled debt service or other ongoing financing costs, to the extent such ongoing financing costs are payable from transition charge revenues. If any upfront financing costs cannot be reasonably determined before the principal amount of restructuring bonds is fixed, such financing costs shall be estimated and the aggregate of such estimates shall be included as an upfront financing cost for purposes of determining the principal amount of restructuring bonds to be issued. If the actual upfront financing costs are greater than the estimated upfront financing costs, the difference shall be deemed to be an ongoing financing cost; if the actual upfront financing costs are less than the estimated upfront financing costs, the proceeds corresponding to such difference shall be used to pay ongoing financing costs.

§ 3. Procedure; judicial review. 1. Standard. The authority may prepare a restructuring cost financing order for the purpose of issuing restructuring bonds to refinance outstanding debt of the authority based on a finding that such bond issuance is expected to result in savings to consumers of electric transmission and distribution services in the service area on a net present value basis.

2. Public hearings. Notwithstanding any other provision of law to the

contrary, at any time after the effective date of this act, after making such finding, the authority shall schedule and hold one or more expedited public statement hearings on the proposed restructuring cost financing order. After the conclusion of such hearings and its review of any comments received, the authority shall finalize the restructuring cost financing order for submission to the board of trustees of the authority and to the public authorities control board ("PACB"). The PACB shall have the power and it shall be its duty to, upon receiving an application for approval of a restructuring cost financing order, within thirty days after receipt of such order, either approve, absent any conditions of approval, or disapprove such order based solely on the assumptions and conditions set forth in the restructuring cost financing order and whether such order complies with the standards set forth in this act. If the public authorities control board fails to approve or disapprove such restructuring cost financing order within such thirty day period, the PACB shall be deemed to have approved the restructuring cost financing order. If the board of trustees of the authority approves such restructuring cost financing order and the PACB approves or is deemed to have approved such restructuring cost financing order, the restructuring cost financing order shall become a final rate order by the authority.

3. Appeals. Because delay in the final determination of the petition will delay the issuance of restructuring bonds, thereby diminishing savings to consumers that might be achieved if the restructuring bonds were issued promptly after the issuance of the restructuring cost financing order, notwithstanding any other law to the contrary, any action, suit or proceeding to which the authority or the restructuring bond issuer may be a party, in which any question arises as to the validity of this act or any restructuring cost financing order, shall be preferred over all other civil causes in all courts of the state, except election matters, and shall be heard and determined in preference to all other civil business pending therein, except election matters, irrespective of position on the calendar. Such preference shall also be granted upon application of counsel to the authority in any action or proceeding questioning the validity of this act or any restructuring cost financing order in which such counsel may be allowed to intervene. Notwithstanding any other provision of law to the contrary, the validity of this act may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days of the effective date of this act, and the validity of any restructuring cost financing order may only be challenged by an aggrieved party pursuant to an action, suit or proceeding filed within thirty days after such restructuring cost financing order becomes a final rate order by the authority; provided, however, that any such action, suit or proceeding and all supporting papers shall be filed directly to the Supreme Court, Appellate Division, Second Judicial Department.

4. Expiration of appeals. The authority shall provide written notification to the restructuring bond issuer upon the authority's determination that any and all actions, suits and proceedings challenging this

act and the final restructuring cost financing order have been denied or dismissed or the timing associated with the filing of such actions, suits and proceedings has lapsed or expired, and any related appeals have been exhausted or the timing related to such appeals has lapsed or expired.

5. Agreement to sell restructuring bonds. Within the time specified in

the restructuring cost financing order, after receiving notice from the authority that the time for petitions and appeals has lapsed or expired, the restructuring bond issuer shall enter into an agreement with one or more underwriters or purchasers satisfactory to the authority to sell the restructuring bonds in compliance with the restructuring cost financing order. No later than the third business day after the pricing of the restructuring bonds in accordance with such agreement, the initial servicer shall determine the initial transition charges and the expected savings to consumers in accordance with the restructuring cost financing order and shall file an issuance advice letter with the authority and the restructuring bond issuer setting forth the principal amount of restructuring bonds to be issued, the pricing, the net proceeds, the initial transition charges, the expected savings to consumers and any other information required by the restructuring cost financing order. No later than the end of the third business day after the filing of such issuance advice letter, the authority shall confirm in a notice to the restructuring bond issuer that such pricing complies with the restructuring cost financing order.

6. Issuance of restructuring bonds. Within ninety days after receiving notice of confirmation from the authority, the restructuring bond issuer shall issue the restructuring bonds, in one or more series or tranches and at one or more times, pursuant to the agreement to sell the restructuring bonds. The restructuring bond issuer shall purchase the restructuring property from the authority for a purchase price equal to the net proceeds from the sale of the restructuring bonds less any amounts of such proceeds required to fund or pay upfront financing costs.

7. Irrevocability. Upon the issuance of the restructuring bonds, the transition charges, including any adjustments thereof as provided in the restructuring cost financing order, shall be deemed established by the authority as irrevocable, final and effective without further action by the authority, or any other entity. The state, including the authority or any successor regulator, thereafter may not in any way take or permit any action to reduce, impair, postpone or terminate the transition charges approved in the restructuring cost financing order, as the same may be adjusted from time to time pursuant to subdivision 3 of section five of this act, or impair the restructuring property or the collection or recovery of transition charge revenues, including, but not limited to, either directly or indirectly by taking transition charges into account when setting other rates for any owner of the T&D system assets; nor shall the amount of revenues arising with respect to restructuring property be subject in any way to reduction, impairment, postponement, or termination.

8. Application of proceeds. The restructuring bond issuer shall cause the proceeds from its issuance of the restructuring bonds to be placed in one or more separate accounts and used only to pay or fund upfront financing costs and to purchase the restructuring property from the authority. The authority shall cause the proceeds from its sale of restructuring property to be placed in one or more separate accounts and used only to pay approved restructuring costs, and if funds remain in those accounts after the payment of all approved restructuring costs, to

make a refund or credit to consumers on the same basis that transition charges are then being imposed, to the extent such a refund or credit is practical.

§ 4. Creation of restructuring bond issuer. 1. Creation of restructuring bond issuer. For the purpose of effectuating the purposes

declared in section one of this act, there is hereby created a special purpose corporate municipal instrumentality of the state to be known as "utility debt securitization authority", which shall be a body corporate and politic, a political subdivision of the state, and a public benefit corporation, exercising essential governmental and public powers for the good of the public. The restructuring bond issuer shall not be created or organized, and its operations shall not be conducted, for the purpose of making a profit. No part of the revenues or assets of the restructuring bond issuer shall inure to the benefit of or be distributable to its trustees or officers or any other private persons, except as herein provided for actual services rendered.

2. Activities limited to issuing restructuring bonds and related activities.

(a) The restructuring bond issuer is hereby authorized to:

(i) issue the restructuring bonds contemplated by a restructuring cost financing order, and use the proceeds thereof to purchase or acquire, and to own, hold and use restructuring property or to pay or fund upfront financing costs provided, however, that the restructuring bond issuer shall only issue and sell restructuring bonds once;

(ii) contract for servicing of restructuring property and restructuring bonds and for administrative services; and

(iii) pledge the restructuring property to secure the restructuring bonds and the payment of ongoing financing costs, all pursuant to section seven of this act.

(b) So long as any restructuring bonds remain outstanding, the restructuring bond issuer shall not be authorized to merge or consolidate, directly or indirectly, with any person or entity. Additionally, the restructuring bond issuer shall not have the power or authority to incur, guarantee or otherwise become obligated to pay any debt or other obligations other than the restructuring bonds and financing costs unless otherwise permitted by the restructuring cost financing order. The restructuring bond issuer shall keep its assets and liabilities separate and distinct from those of any other entity.

(c) The restructuring bond issuer shall have no additional authority to engage in other business activities; provided, however, that in connection with the powers specified in paragraph (a) of subdivision 2 of this section, as a financing entity, the restructuring bond issuer shall have the power to:

(i) sue and be sued;

(ii) have a seal and alter the same at pleasure;

(iii) make and alter by-laws for its organization and internal management and make rules and regulations governing the use of its property;

(iv) make and execute contracts and all other instruments necessary or convenient for the exercise of its powers and functions under this act and to commence any action to protect or enforce any right conferred upon it by any law, contract or other agreement, including, without limitation, make and execute contracts with the authority, LIPA or any successor owner of the T&D system assets, any servicers, any financing entity or any other public or private entities to service restructuring property owned by restructuring bond issuer, to service restructuring bonds issued by restructuring bond issuer, and to provide services in

administering the restructuring bond issuer, and to pay compensation for such services;

(v) appoint officers, agents and employees, prescribe their duties and qualifications, fix their compensation and engage the services of

private consultants, accountants, counsel and others on a contract basis for rendering professional and technical assistance and advice;

(vi) pay its operating expenses, scheduled debt service on the restructuring bonds and other ongoing financing costs;

(vii) issue restructuring bonds and provide for the rights of the holders thereof;

(viii) procure insurance against any loss in connection with its activities, properties and assets in such amount and from such insurers as it deems desirable;

(ix) invest any funds or other moneys under its custody and control in investment securities or under any ancillary agreement;

(x) establish and maintain such reserves, special funds and accounts, to be held in trust or otherwise, as may be required by agreements made in connection with the restructuring bonds, or any agreement between itself and third parties;

(xi) as security for the payment of the principal of and interest on any restructuring bonds issued by it pursuant to this act, and any agreement made in connection therewith, pledge all or any part of its revenues or assets, including, without limitation, restructuring property, unspent proceeds of its restructuring bonds, transition charge revenues, and earnings from the investment and reinvestment of unspent proceeds of its restructuring bonds and transition charge revenues; and

(xii) do any and all things necessary or convenient to carry out its purposes and exercise the powers expressly given and granted in this section.

3. No authority to file for bankruptcy protection. The restructuring bond issuer shall not be authorized to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. No governmental officer or organization is empowered to authorize, whether by executive order or otherwise, restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code. Until at least one year and one day after all restructuring bonds issued by restructuring bond issuer have ceased to be outstanding and all unpaid financing costs have been paid, the state hereby pledges, contracts and agrees with owners of restructuring bonds issued by restructuring bond issuer that the state will not limit or alter the denial of authority to the restructuring bond issuer to be a debtor under chapter 9 of the United States Bankruptcy Code or any other provision of the United States Bankruptcy Code.

4. Governance. The restructuring bond issuer shall be governed by a board consisting of three trustees appointed by the governor. The trustees shall not be trustees, directors, officers, or employees of the authority, LIPA or any successor owner of the T&D system assets.

(a) One of the trustees first appointed shall serve for a term ending four years from January first next succeeding his appointment; one of such trustees shall serve for a term ending five years from such date; and one of such trustees shall serve for a term ending six years from such date. Their successors shall serve for terms of six years each. Trustees shall continue in office until their successors have been appointed and qualified and the provisions of section 39 of the public officers law shall apply. In the event of a vacancy occurring in the

office of a trustee by death, removal, resignation or otherwise, the Governor shall appoint a successor to serve for the balance of the unexpired term.

(b) Trustees shall serve without salary or other compensation, but each trustee shall be entitled to reimbursement for actual and necessary expenses incurred in the performance of his or her official duties.

(c) A majority of the trustees shall constitute a quorum for the transaction of any business or the exercise of any power or function of restructuring bond issuer. Any one or more trustees may participate in a meeting of the board by means of a conference telephone or similar communications equipment allowing all persons participating in the meeting to hear each other at the same time. Participation by such means shall constitute presence in person at a meeting. The board may delegate to one or more of its trustees, or officers, agents and employees, such powers and duties as the board may deem proper.

(d) Such trustees may engage in private employment, or in a profession or business. Restructuring bond issuer, its trustees, officers and employees shall be subject to the provisions of sections 73 and 74 of the public officers law.

(e) Notwithstanding any inconsistent provision of law to the contrary, general, special or local, no officer of the state or of any civil division thereof shall be deemed to have forfeited or shall forfeit his or her office or employment by reason of his or her acceptance of an appointment as trustee of restructuring bond issuer.

(f) The governor may remove any trustee for inefficiency, neglect of duty or misconduct in office after giving him or her a copy of the charges against him or her and an opportunity to be heard, in person or by counsel, in his or her defense, upon not less than ten days notice. If any trustee shall be so removed, the governor shall file in the office of the department of state a complete statement of the charges made against such trustee and his or her findings thereon, together with a complete record of the proceedings.

(g) Each trustee shall have a fiduciary duty to act in the best interests of the restructuring bond issuer, including its creditors, the owners of the restructuring bonds, and such other duties as may be specified in the organizational documents or other agreements of the restructuring bond issuer.

(h) The restructuring bond issuer and its corporate existence shall continue until one year and one day after all restructuring bonds and ongoing financing costs and other indebtedness of restructuring bond issuer have been actually paid and all its other liabilities and obligations have been paid, met or otherwise discharged. Upon termination of the existence of restructuring bond issuer, all of its rights and property shall pass to and be vested in the state.

§ 5. Restructuring cost financing orders. 1. Content of restructuring cost financing orders. The restructuring cost financing order shall include the following: (i) a description of the approved restructuring costs; (ii) the amount of approved restructuring costs that the authority proposes to pay through the sale of the restructuring property and the issuance of the restructuring bonds; (iii) designation of the authority as the entity in which initial ownership of restructuring property will vest; (iv) an estimate of the date on which restructuring bonds will be issued and the expected scheduled term to maturity of the restructuring bonds; (v) a description of the estimated debt service on the restructuring bonds and other ongoing financing costs that may be recovered through transition charges; as part of this description, the

restructuring cost financing order may include qualitative or quantitative limitations on financing costs approved to be recovered provided

that no such limitation on financing costs shall impair the ability of the restructuring bond issuer to pay and service the restructuring bonds in accordance with their terms; (vi) a proposed methodology for allocating transition charges on an equal percentage basis among customer service classifications and among volumetric (kWh) and demand (kW) charges within those customer service classifications, along with an associated bill impact analysis of the proposed methodology; (vii) a description of the proposed adjustment mechanism to reconcile actual collections with forecasted collection on at least an annual basis and a finding that the adjustment mechanism is just and reasonable; (viii) a description of the benefits to consumers in the service area that are expected to result from the sale of the restructuring property and the issuance of restructuring bonds as opposed to traditional alternative financing mechanisms; (ix) specifying the entity that will contract to act as servicer with respect to the restructuring property and the restructuring bonds on terms and conditions mutually acceptable to such servicer and the restructuring bond issuer; (x) specifying the entity or entities that will contract to provide administrative or other services to the restructuring bond issuer; (xi) specifying when the restructuring property will be created and vest and addressing such other matters as may be necessary or desirable for the marketing or servicing of the restructuring bonds or the servicing of the restructuring property; (xii) authorizing the imposition, billing and collection of transition charges to pay debt service on the restructuring bonds and other ongoing financing costs; (xiii) a description of the restructuring property that will be created and that may be used to pay and secure the payment of the restructuring bonds approved to be issued in the restructuring cost financing order; (xiv) a requirement that the amounts in the debt service reserve accounts or other accounts funded with the proceeds of restructuring bonds or transition charges be fully used, to the extent practical, to make the final payments of principal and interest on the restructuring bonds and other ongoing financing costs or to make refunds to consumers on the same basis as such consumers would have then been obligated to pay transition costs; and (xv) the finding required by subdivision 1 of section 3 of this act.

2. Periodic reports. A restructuring cost financing order shall require the restructuring bond issuer or the servicer to file at least annually with the authority and the appropriate financing entity a periodic report showing the billing and collection of transition charges, the application of transition charge revenues to debt service on the restructuring bonds and other ongoing financing costs, and the balances in any debt service reserve accounts or other accounts required by the restructuring cost financing order.

3. Adjustment mechanism.

(a) Each restructuring cost financing order shall include a mathematical formula for making periodic adjustments to the transition charges. The mathematical formula shall apply the following principles:

(i) The transition charges will be adjusted at least annually to ensure that the collections of transition charges are adequate to pay principal and interest on the associated restructuring bonds when due pursuant to the expected amortization schedule, to fund all debt service reserve accounts to the required levels and to pay when due all other expected ongoing financing costs.

(ii) The adjustments of transition charges will take into account historical and reasonably foreseeable differences between amounts billed

and amounts collected due to applicable taxes, consumer defaults and delays, billing lags, write-offs and other factors.

(iii) The adjustments of transition charges will take into account historical and reasonably foreseeable variations in billings due to variations in electricity consumption associated with the seasons, storms and other weather conditions, outages, gain or loss of consumers, efficiencies, electric vehicles, economic conditions or other factors.

(iv) The adjustments of transition charges will take into account any over-collection or under-collection of transition charges so that, to the extent practical, the outstanding balance of restructuring bonds is equal to the scheduled balance on the expected amortization schedule, the amounts in the debt service reserve accounts are equal to the required reserve level, and all ongoing financing costs are paid when due.

(v) The adjustments of transition charges will be applied ratably to the transition charges for each customer service classification.

(b) Once restructuring bonds have been issued, the adjustment mechanism specified in the restructuring cost financing order shall be applied to correct for any over-collection or under-collection of transition charges and to provide for timely payment of scheduled principal of and interest on the restructuring bonds and the payment and recovery of other ongoing financing costs in accordance with the restructuring cost financing order. Application of the adjustment mechanism shall occur at least annually or more frequently as provided in the restructuring cost financing order. A notice of such periodic adjustment of transition charges shall be filed with the authority by or on behalf of the owner of restructuring property and a copy shall be provided to the owner of the T&D system assets at least sixty days before the adjustment is to take effect, provided that the restructuring bond issuer may request an earlier effective date.

(c) Each adjustment to the transition charge, in amounts as calculated by or on behalf of the owner of restructuring property, shall automatically become effective sixty days following the date on which the notice of periodic adjustment is filed with the authority unless the authority approves an earlier effective date requested by the restructuring bond issuer.

(d) Notwithstanding any other provision of law to the contrary, the authority shall allow interested parties thirty days from the date of filing of the notice for adjustment within which to make comments. Such comments shall be limited to the mathematical accuracy of the calculations of the amount of the adjustments. If the authority determines that the calculation of the transition charge adjustment in the notice was mathematically inaccurate, the transition charge adjustment shall be changed as soon as it is reasonably practical to do so, but estimated overcollections or undercollections resulting from the mathematical error shall be taken into account in the next succeeding periodic adjustment.

(e) No adjustment pursuant to this section shall in any way affect the irrevocability of the restructuring cost financing order as specified in subdivision 4 of section five of this act. No adjustment pursuant to this section shall require any approvals or action under any other law or shall be deemed to be the establishment of a new charge, fee or rate under any law.

4. Irrevocability of restructuring cost financing orders.

(a) A restructuring cost financing order shall be an irrevocable final

rate order when the time for any actions, suits, proceedings and appeals challenging such final restructuring cost financing order has lapsed or expired as provided in subdivision 3 of section three of this act.

(b) A restructuring cost financing order may be amended on or after the date of issuance of restructuring bonds approved thereunder only: (i) at the request of the authority; (ii) in accordance with any restrictions and limitations on amendment set forth in the restructuring cost financing order; (iii) subject to the limitations set forth in subdivision 7 of section three of this act; and (iv) upon approval by the PACB within thirty days of receipt of such amendment; provided, however, that if no approval or disapproval is made within such time, the amendment shall be deemed approved.

(c) This act, and any restructuring cost financing order made pursuant to this act, shall not be interpreted to alter or limit the rights vested in the authority to establish sufficient T&D rates to pay and perform all of its obligations and contracts with the authority's bondholders and others when due.

5. Effect of restructuring cost financing order.

(a) A restructuring cost financing order shall remain in effect and unabated until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all ongoing financing and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) A restructuring cost financing order shall remain in effect and unabated notwithstanding the bankruptcy, reorganization or insolvency of the authority, the restructuring bond issuer, LIPA or any successor owner of the T&D system assets, or any affiliate of the aforementioned, or the commencement of any judicial or nonjudicial proceeding therefor.

(c) For so long as restructuring bonds issued pursuant to a restructuring cost financing order are outstanding, and the related approved restructuring costs have not been paid in full, the transition charges authorized in the restructuring cost financing order shall be non-bypassable and shall apply to all consumers connected to the T&D system assets and taking electric delivery service located within the service area, whether or not the consumers produce their own electricity or purchase electric generation services from a provider of electric generation services other than the owner of the T&D system assets and whether or not the T&D system assets continue to be owned by LIPA.

§ 6. Restructuring bonds. 1. No recourse. Restructuring bonds shall be without recourse to the credit or any assets of the authority, LIPA and the restructuring bond issuer, other than the restructuring property and other assets and revenues of restructuring bond issuer as specified in the pertinent restructuring cost financing order.

2. Exemption from taxation.

(a) It is hereby found and declared that the activities of the restructuring bond issuer are primarily for the benefit of the people of the state of New York, for the improvement of their welfare and prosperity, and is a public purpose, and the restructuring bond issuer shall be regarded as performing an essential governmental function in carrying out the provisions of this act.

(b) The restructuring bond issuer shall not be required to pay taxes or assessments upon any of the property acquired or controlled by it or upon its activities in the use thereof or upon income derived therefrom.

(c) Restructuring bonds, their transfer and the income therefrom shall, at all times, be free from taxation by the state or any munici-

pality, except for estate and gift taxes.

3. Restructuring bonds not debt of the state. Restructuring bonds issued pursuant to a restructuring cost financing order and the provisions of this act shall not constitute a debt, general obligation or a pledge of the faith and credit or taxing power of the state or of any county, municipality or any other political subdivision, agency or instrumentality of the state. Holders of restructuring bonds shall not be taxed by the legislature or the taxing authority of any county, municipality or any other political subdivision, agency or instrumentality of this state for the payment of the principal thereof or interest thereon. The issuance of restructuring bonds does not obligate the state or any county, municipality or any other political subdivision, agency or instrumentality of the state to levy any tax or make any appropriation for payment of the principal of or interest on the restructuring bonds. All restructuring bonds must contain a statement to the following effect: "Neither the full faith and credit nor the taxing power of the state of New York is pledged to the payment of the principal of, or interest on, this bond."

4. Restructuring bonds as legal investments. Any restructuring bonds issued by the restructuring bond issuer are hereby made securities in which all public officers and bodies of this state and all municipalities, all insurance companies and associations and other persons carrying on an insurance business, all banks, bankers, trust companies, savings banks and savings associations, including savings and loan associations, building and loan associations, investment companies and other persons carrying on a banking business, all trusts, estates and guardianships and all other persons whatsoever, who are now or may hereafter be authorized to invest in bonds or other obligations of this state, may properly and legally invest funds, including capital in their control or belonging to them. The restructuring bonds are also hereby made securities which may be deposited with and shall be received by all public officers and bodies of the state and all municipalities for any purpose for which the deposit of bonds or other obligations of the state is now or may hereafter be authorized.

§ 7. Restructuring property. 1. (a) Restructuring property that is created pursuant to a restructuring cost financing order shall constitute an existing, present property right, notwithstanding the fact that the imposition and collection of transition charges will depend on further acts that have not yet occurred, including but not limited to: (i) LIPA or any successor owner of the T&D system assets delivering electric energy or related services, (ii) a servicer performing servicing functions relating to the collection of transition charges, or (iii) the level of future consumption of electric energy. Restructuring property shall exist whether or not transition charges have been imposed, billed, accrued or collected and notwithstanding the fact that the value or amount of the restructuring property is dependent on the future provision of service to customers by LIPA or any successor owner of the T&D system assets.

(b) All restructuring property created pursuant to a restructuring cost financing order shall continue to exist until the restructuring bonds issued pursuant to such restructuring cost financing order are paid in full and all ongoing financing costs relating to the restructuring bonds have been paid in full.

(c) The restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of

restructuring property may be pledged to secure the payment of restructuring bonds, amounts payable to financing parties, amounts payable to holders of restructuring bonds, amounts payable under any ancillary agreement and other ongoing financing costs. So long as the restructuring property remains pledged to secure the restructuring bonds, revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs. After the occurrence of an event of default with respect to the restructuring bonds, all or any portion of restructuring property may be transferred, sold, conveyed or assigned to any person or entity. Any transfer, sale, conveyance, assignment, grant of a security interest in or pledge of restructuring property by the authority, the restructuring bond issuer, or other financing entity, to the extent previously approved in a restructuring cost financing order, does not require the prior consent and approval of any other person or entity under the public service law or any other law.

(d) If the owner of the T&D system assets, servicer, third-party biller, or any other person or entity authorized to collect transition charges, defaults on any required remittance of transition charge revenues, any court in the state, upon application by an interested party and without limiting any other remedies available to the applying party, shall order the sequestration and payment of the transition charge revenues for the benefit of the owners or pledgees of restructuring property. The order shall remain in full force and effect notwithstanding any bankruptcy, reorganization, or other insolvency proceedings with respect to a servicer, authority, LIPA or any successor owner of the T&D system assets or any affiliate thereof or of any other person or entity.

(e) Restructuring property, transition charges, transition charge revenues, and the interests of an assignee, bondholder, financing party or any other person in restructuring property or in transition charge revenues, are not subject to setoff, counterclaim, surcharge or defense by a servicer, any consumer, the authority, LIPA or any successor owner of the T&D system assets or any other person or in connection with any default, bankruptcy, reorganization or other insolvency proceeding of the authority, LIPA or any successor owner of the T&D system assets, any affiliate thereof or any other entity or otherwise. To the extent that any consumer makes a partial payment of a bill containing both transition charges and any other charges, such payment shall be allocated pro rata between the transition charges and the other charges unless the consumer specifies that a greater proportion of such payment is to be allocated to the transition charges, except that the other charges shall be reduced by the amount of any claims of setoff, counterclaim, surcharge or defense for purposes of such allocation.

(f) Any successor owner of the T&D system assets and any successor servicer shall be bound by the requirements of this act and shall perform and satisfy all obligations of a servicer in the same manner and to the same extent under a restructuring cost financing order as did LIPA and the initial servicer, including, without limitation, the obligation to impose, bill and collect the transition charges and to pay such collections to the person entitled to receive the transition charge revenues.

2. Security interests. Any pledge of restructuring property or proceeds thereof, including any moneys, revenues or property or of a revenue producing contract or contracts constituting part of the

restructuring property, made by the owner of restructuring property,

shall be perfected, valid and binding from the time when the pledge is made. The proceeds, moneys, revenues or proceeds so pledged and thereafter received by the owner of restructuring property shall immediately be subject to the lien of such pledge, and such lien shall be perfected, without any physical delivery thereof or further act. The lien of any such pledge shall be perfected, valid and binding as against all parties having claims of any kind in tort, contract or otherwise against the owner of restructuring property irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens obtained by such claimants or transferees. The description of the restructuring property in a pledge or security agreement and any financing statement is sufficient if and only if the description refers to this Act and the restructuring cost financing order creating such restructuring property. No instrument by which a pledge or lien is created pursuant to this subdivision need be recorded in order to perfect such pledge or lien. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article 9 of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that the secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed. A pledge of restructuring property is a continuously perfected security interest and has priority over any other lien, created by operation of law or otherwise, that may subsequently attach to that restructuring property or proceeds thereof unless the holder of any such lien has agreed in writing otherwise. Any pledgee of restructuring property shall have a perfected security interest in the amount of all restructuring property revenues or other proceeds that are deposited in any deposit account or other account of the servicer or other entity in which restructuring property revenues or other proceeds have been commingled with other funds. Any other security interest that may apply to restructuring revenues or other proceeds shall be terminated when such revenues or proceeds are transferred to a segregated account for an assignee or a financing party. No application of the adjustment mechanism as described in this act shall affect the validity, perfection, or priority of a pledge of, security interest in or the sale or transfer of restructuring property.

3. Sales of restructuring property.

(a) A transfer of all or any portion of restructuring property, which the parties in the governing documentation have expressly stated to be a sale or other absolute transfer, in a transaction approved in a restructuring cost financing order, shall be treated as an absolute transfer of all of the transferor's right, title, and interest (as in a true sale), and not as a pledge or other financing, of the restructuring property, other than for federal, state and local income and franchise tax purposes.

(b) Any transfer of an interest in restructuring property shall be perfected, vested, valid and binding from the time when the transfer is made. Such transfer shall be perfected, vested, valid and binding as against the transferor, all parties having claims of any kind in tort, contract or otherwise against the transferor, and all other transferees of the transferor, irrespective of whether such parties have notice thereof and shall be superior to any judicial liens or other liens

obtained by such claimants or transferees. The description of the restructuring property in a sale or transfer agreement and any financing statement is sufficient if and only if the description refers to this act and the restructuring cost financing order creating such restructuring property. No instrument by which a transfer is created pursuant to this section need be recorded in order to perfect such transfer. However, the restructuring bond issuer shall cause a financing statement describing the pledge and referring to the restructuring cost financing order and the restructuring property described therein to be filed for informational purposes only under article nine of the uniform commercial code. The secretary of state shall maintain any financing statement filed under this section in the same manner that such secretary maintains financing statements filed by transmitting utilities under section 9-501 of the uniform commercial code until a termination statement is filed.

(c) The characterization of the sale, assignment or transfer as an absolute transfer and true sale and the corresponding characterization of the property interest of the purchaser, shall not adversely be affected or impaired by, among other things, the occurrence of any of the following factors: (i) commingling of revenues or other proceeds from transition charges with other amounts; (ii) the retention by the seller of: (A) a partial or residual interest, including an equity interest, in the restructuring property, whether direct or indirect, or whether subordinate or otherwise; or (B) the right to recover costs associated with taxes, payments in lieu of taxes, franchise fees or license fees imposed on the collection of transition charges; (iii) any recourse that the purchaser may have against the seller; (iv) any indemnification rights, obligations or repurchase rights made or provided by the seller; (v) the obligation of the seller to collect transition charges on behalf of an assignee, including but not limited to, any retention by the seller to bare legal title for the purpose of collecting transition charges; (vi) the treatment of the sale, assignment or transfer for tax, financial reporting or other purposes; (vii) any subsequent order of the authority amending a restructuring cost financing order pursuant to paragraph (b) of subdivision 4 of section five of this act; or (viii) any application of the adjustment mechanism as provided in subdivision 3 of section five of this act.

(d) An assignee or financing party shall not be considered to be a public utility or person providing electric service solely by virtue of the transactions described in this act.

§ 8. Rights and duties while restructuring bonds are outstanding. 1. Responsibilities of the authority. (a) For the purpose of investigating compliance with the provisions of this act and the applicable restructuring cost financing order, the authority shall have the right, jurisdiction, power and authority to examine the books and records of LIPA or any successor owner of the T&D system assets, the restructuring bond issuer, any other financing entity, any servicer, any third-party biller and any other person or entity that owns restructuring property or has the right to impose, bill or collect transition charges until the restructuring bonds issued pursuant to the restructuring cost financing order have been paid in full and all financing costs relating to such restructuring bonds have been paid in full.

(b) Neither the authority nor any successor regulator may, in exercising its powers and carrying out its duties regarding regulation and ratemaking, consider restructuring bonds issued pursuant to the restructuring cost financing order to be the debt of any owner of the T&D

system assets, consider transition charges paid under the restructuring cost financing order to be revenue of any owner of the T&D system assets, or consider the approved restructuring costs or ongoing financing costs specified in the restructuring cost financing order to be costs of any owner of the T&D system assets or any affiliate, nor may the authority or any successor regulator determine that any action taken by any owner of the T&D system assets that is consistent with the restructuring cost financing order is unjust or unreasonable from a regulatory or ratemaking perspective; provided that, subject to the limitations set forth in subdivision 4 of section five of this act and the state pledge in section nine of this act, nothing in this subdivision shall (i) affect the authority to apply the adjustment mechanism as provided in subdivision 3 of section five of this act; (ii) prevent or preclude the authority from investigating the compliance of any owner of the T&D system assets and of any financing entity with the terms and conditions of a restructuring cost financing order and requiring compliance therewith; or (iii) prevent or preclude the authority or any successor regulator from imposing regulatory sanctions against any owner of the T&D system assets for failure to comply with the terms and conditions of a restructuring cost financing order or the requirements of this act. When setting other rates for any owner of the T&D system assets, nothing in this act shall prevent the authority or any successor regulator from taking into account the collection by such owner of servicing fees in excess of incremental costs of providing servicing services, or the collection by such owner of administration fees in excess of incremental costs of providing administration services; provided that this would not result in a recharacterization of the tax, accounting, and other intended characteristics of the financing, including, but not limited to, either of the following: (i) treating restructuring bonds as debt for federal income tax purposes; or (ii) treating any transfer of the restructuring property to the restructuring bond issuer or to any other financing entity as a true sale for bankruptcy purposes.

2. Duties of financing entities and any owner of T&D system assets.

(a) Any failure of any financing entity to apply the proceeds of restructuring bonds, or proceeds from the sale of restructuring property, in a reasonable, prudent and appropriate manner or otherwise comply with any provision of this act shall not invalidate, impair or affect any restructuring cost financing order, restructuring property, transition charge, or restructuring bonds.

(b) Any owner of T&D system assets, any servicer, any third-party biller and any other entity that bills or collects T&D rates shall simultaneously impose, bill and collect any transition charges applicable to consumers in the service area, including all consumers connected to the T&D system assets and taking electric delivery service located within the service area, shall allocate partial payments by consumers as provided in this act, shall terminate service to non-paying consumers on the same basis as termination of service is permitted for non-payment of T&D rates, shall exercise all enforcement rights of the owner or pledgee of the restructuring property for the benefit of such owner or pledgee, and shall remit any transition charge revenue to the owner or pledgee of the restructuring property.

§ 9. State pledge. (a) The state pledges to and agrees with the holders of restructuring bonds, any assignee and all financing entities that the state will not in any way take or permit any action that limits, alters or impairs the value of restructuring property or, except as

required by the adjustment mechanism described in the restructuring cost financing order, reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full.

(b) Any person who issues restructuring bonds is permitted to include the pledge specified in subdivision (a) of this section in the restructuring bonds, ancillary agreements and documentation related to the issuance and marketing of the restructuring bonds.

§ 10. Choice of law. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in any restructuring property, transition charge or restructuring cost financing order, shall be the laws of the state of New York.

§ 11. Conflicts. In the event of conflict between this act and any other law regarding the attachment, assignment or perfection, or the effect of perfection, or priority of any pledge of, security interest in or transfer of restructuring property, this act shall govern to the extent of the conflict. In the event of conflict between this act and the public service law, the Long Island power authority act or any other law, this act shall govern to the extent of the conflict. Notwithstanding any provisions of law to the contrary, no approvals, notices or authorizations other than those specified in this act shall be required with respect to any restructuring cost financing order, and the transactions and contracts authorized in or contemplated by this act or any restructuring cost financing order, including but not limited to the incurrence and payment of any financing costs, the incurrence or payment of any approved restructuring costs, the issuance of restructuring bonds, the sale or other transfer of restructuring property, and any contracts and expenses incurred to facilitate the preparation of any restructuring cost financing order.

§ 12. Effect of invalidity on actions. Effective on the date that restructuring bonds are first issued under this act, if any provision of this act is held to be invalid or is invalidated, superseded, replaced, repealed or expires for any reason, that occurrence shall not affect any action allowed under this act that is taken by the authority, LIPA, the restructuring bond issuer, any owner of T&D system assets, an assignee, a collection agent, a financing party, a holder of restructuring bonds or a party to an ancillary agreement and any such action shall remain in full force and effect.

§ 13. Effectiveness of the act. The authority may not adopt its first restructuring cost financing order after the five year period after the effective date of this act.

§ 14. Severability. If any section, subdivision, paragraph or subparagraph of this act or the application thereof to any person, circumstance or transaction is held by a court of competent jurisdiction to be unconstitutional or invalid, the unconstitutionality or invalidity shall not affect the constitutionality or validity of any other section, subdivision, paragraph or subparagraph of this act or its application or validity to any person, circumstance or transaction, including, without limitation, the irrevocability of a restructuring cost financing order

ing bonds, the imposition of transition charges, the transfer or assignment of restructuring property or the collection and recovery of revenues from transition charges. To these ends, the legislature hereby declares that the provisions of this act are intended to be severable and that the legislature would have enacted this act even if any section, subdivision, paragraph or subparagraph of this act held to be unconstitutional or invalid had not been included in this act.

§ 15. Standing. (a) The owner of restructuring property, or the trustee representing holders of restructuring bonds, shall be expressly permitted hereby to bring actions against any owner of the T&D system assets, any third-party biller, or any other entity authorized to bill or collect T&D rates, any consumers in the service area or any other person or entity for failure to impose, bill, pay or collect any transition charges constituting part of the restructuring property then held pledged as security for such restructuring bonds or for enforcement of any other provision of this act or the applicable restructuring cost financing order.

(b) Except as provided in section three of this act, any court and the authority shall have jurisdiction over any actions for failure to impose, bill, pay or collect any transition charges or for enforcement of other provision of this act or any restructuring cost financing order.

§ 16. Third-party billing. If and to the extent that third parties are allowed to bill and/or collect any transition charges, the authority, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers, which generally would include (i) operational standards and minimum credit requirements for any such third-party biller, or require a cash deposit, letter of credit or other credit mitigant in lieu thereof, to minimize the likelihood that defaults by a third-party biller would result in an increase in transition charges thereafter billed to consumers, (ii) a finding that, regardless of who is responsible for billing, consumers shall continue to be responsible for transition charges, (iii) if a third party meters and bills for the transition charges, that the owner of the T&D system assets and any servicer must have access to information on billing and usage by consumers to provide for proper reporting to the restructuring bond issuer and to perform its obligations as servicer, (iv) in the case of a default by a third-party biller, billing responsibilities must be promptly transferred to another party to minimize potential losses, and (v) the failure of consumers to pay transition charges shall allow service termination by the owner of the T&D system assets on behalf of the restructuring bond issuer of the consumers failing to pay transition charges in accordance with service termination rules and orders applicable to T&D rates. Any costs associated with such third-party billing and/or collection shall be included as part of the recoverable ongoing financing costs or other rates or charges, as appropriate. Further, the authority and any successor regulator shall not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the then current ratings on any tranche or series of the restructuring bonds by any nationally recognized statistical rating organization designated by the restructuring bond issuer.

§ 17. This act shall take effect immediately.

§ 2. Severability clause. If any clause, sentence, paragraph, subdivi-

sion, section or part of this act shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not take

affect, impair, or invalidate the remainder thereof, but shall be confined in its operation to the clause, sentence, paragraph, subdivision, section or part thereof directly involved in the controversy in which such judgment shall have been rendered. It is hereby declared to be the intent of the legislature that this act would have been enacted even if such invalid provisions had not been included herein.

§ 3. This act shall take effect immediately; provided, however, that the applicable effective date of Parts A through B of this act shall be as specifically set forth in the last section of such Parts.

The Legislature of the STATE OF NEW YORK **ss:**

Pursuant to the authority vested in us by section 70-b of the Public Officers Law, we hereby jointly certify that this slip copy of this session law was printed under our direction and, in accordance with such section, is entitled to be read into evidence.

DEAN G. SKELOS
Temporary President of the Senate

SHELDON SILVER
Speaker of the Assembly

Overview of Long Island Power Authority

Long Island Power Authority (LIPA) is a not-for-profit public utility and the owner of transmission and distribution networks in Long Island, New York. It is established by statute and the state governor has power to appoint board members. LIPA has entered into a management contracts with the Public Service Enterprise Group (PSEG), a publicly traded utility company in New Jersey, and PSEG's subsidiary now manages the billing and day-to-day operations of the distribution network.

Summary of LIPA Reform Act

Section 1(8) of Part B of the Long Island Power Authority Reform Act, 2013 (the LIPA Reform Act) provides the legislative purpose of the act, which is "to refinance outstanding debt of LIPA, a significant portion of which relates to the cost of constructing and financing the now abandoned Shoreham nuclear power plant". The Act authorizes the creation of a restructuring bond issuer for the limited purpose of "issuing securitized restructuring bonds to purchase restructuring property to finance the cost of purchasing, redeeming or defeasing a portion of the outstanding debt". This section also makes it clear that it is the intention of the legislature to provide a statutory pledge (found in s. 9 of the LIPA Reform Act) that until the restructuring bonds are paid in full, "the state will not in any way take or permit any action to revoke, modify, impair, postpone, terminate or amend this act in any manner that is materially adverse to the owners of the restructuring bonds".

The definitions in section 2 of the LIPA Reform Act provide some clarity to the mechanisms for the securitization regime. Restructuring bonds are issued by the "restructuring bond issuer" (which is established under section 4 of the LIPA Reform Act and known as the "Utility Debt Securitization Authority", or UDSA) and secured by the "restructuring property", which is essentially the property interest in a future revenue stream. In section 2(13), "restructuring property" is defined to include the property rights and interests in the "transition charges". As defined in s. 2(21), transition charges are established and may be amended from time to time in accordance with a restructuring cost financing order, and they are a component of the delivery line on the utility bills.

Section 3 provides the procedures for issuing restructuring bonds by the restructuring bond issuer, and includes appeal procedures and public hearing provisions. Section 4 provides the authority to establish the UDSA as a public corporation, the scope of its activities and its governance structure. It should be noted that section 4(2)(a)(i) provides that "the restructuring bond issuer shall only issue and sell restructuring bonds once" (please also see summary of 2015 amendments below). The UDSA also issues the restructuring cost financing orders in accordance with section 5.

Section 6 sets out the features of the restructuring bonds. Section 6(1) limits bond purchaser's remedies to the restructuring property, i.e. the property interest in a future revenue stream. The restructuring bonds are tax-exempt (section 6(2)), and are not debt of the state (section 6(3)).

Section 7 governs the restructuring property and creates a property interest and security interest in the future revenue stream arising from "transition charges". Section 7(1)(c) provides that "[t]he restructuring property may be transferred, sold, conveyed or assigned to the restructuring bond issuer. All or any portion of restructuring property may be pledged to secure the payment of restructuring bonds", and "revenues from the collection of transition charges shall be applied solely to the repayment of restructuring bonds and other ongoing financing costs."

Section 8(2) provides that any owner of the transmission and distribution network or any other entity that collects the delivery charges on behalf of the owner shall impose the transition charges on the consumers, and shall remit such revenues to the owner or pledgee of the restructuring property.

Section 9 provides the pledge from the state not to take actions to impair the value of the restructuring property. Sections 10 to 17 include procedural provisions such as conflicts, third-party billing and standing.

Summary of 2015 Amendments to LIPA Reform Act

The LIPA Reform Act was further amended in 2015 to permit the issuance of additional restructuring bonds by UDSA or a separate "Utility Debt Securitization Authority No. 2" up to an aggregate maximum amount (including the previously-issued Restructuring Bonds) of $4.5 billion. Any additional issuance of restructuring bonds, whether issued by UDSA or by a new issuer, will be separately secured by distinct collateral pursuant to a new financing order and transaction documents.

Background Information on Duke Energy and Duke Energy Florida

Duke Energy is a publicly-traded utility company with electricity generation and transmission networks in the Carolinas, Florida, Ohio, Kentucky and Indiana. Duke Energy Florida ("**DEF**") is a subsidiary of Duke Energy and distributes power over much of central and north Florida. The Florida Public Service Commission (the "**Commission**") regulates DEF and other electric utilities in Florida (including municipal or investor-owned electric utility, and rural electric cooperative which owns, maintains, or operates an electric generation, transmission, or distribution system).

Summary of Legislative Provisions on Asset Securitization

In 2015, section 366.95 of the Florida Statutes is created to enable "financing for certain nuclear generating asset retirement or abandonment costs". This section includes asset securitization provisions to allow investor-owned electric utilities to set up a special-purpose vehicle ("**SPV**") to issue secured bonds to finance the utility's costs ("nuclear asset-recovery costs") associated with the "early retirement or abandonment of a nuclear generating asset unit". These provisions were likely introduced in response to the closing of Duke Energy's Crystal River nuclear plant in 2013. According to DEF, "[t]his process, called Asset Securitization, will save customers approximately $600 million as compared to traditional cost recovery methods."[1]

Subsection (1) sets out the definitions of some key terms used in the section. The definition of "Assignee" provides examples of different legal structures to set up the SPV, including corporation, limited liability company, trust, partnership or public authority. The definition of "utility" limits the scope of this section to "investor-owned electric utilities" by referring to the same definition in another section of the statute book. "Nuclear asset-recovery bonds" are issued by the utility or assignee, and secured by the "nuclear asset-recovery property", which is the property interest in the revenue stream arising from "nuclear asset-recovery charges".

Subsection (2) requires the utility to submit a petition to the Commission for a financing order before the nuclear asset-recovery bonds can be issued. The petition needs to demonstrate that securitization would result in cost savings or would avoid or mitigate rate impacts compared to the traditional method of cost recovery. Subsection (2) further requires the Commission to address specific areas in its financing order, including: (i) the amount of nuclear asset-recovery costs to be financed by the bonds and the period during which the charges can be imposed on customers; (ii) detailed fact findings on cost-effectiveness and rate impacts; (iii) a requirement that charges be nonbypassable and paid by all existing and future customers receiving transmission or distribution

[1] Duke Energy announcement, "Duke Energy Florida cuts rates for customers", February 8, 2016 <http://www.prnewswire.com/news-releases/duke-energy-florida-cuts-rates-for-customers-300216799.html>

services; and (iv) mechanisms for periodic adjustment in the nuclear asset-recovery charges.

Subsection (3) provides that the bonds are considered debt for the utility only for federal income tax purposes, and limits the Commission's power to impose certain requirements in the financing order.

Subsection (4) sets out specific requirements for utility bills, such as showing the nuclear asset-recovery charge as a separate line item on the utility bill.

Subsection (5) creates a property right in the nuclear asset-recovery charges, which exists even if the charges have not been billed and may be pledged to secure the nuclear asset-recovery bonds. The utility may create a wholly owned subsidiary (the SPV) for the limited purpose of "acquiring, owning, or administering nuclear asset-recovery property or issuing nuclear asset-recovery bonds under the financing order", which also protects the nuclear asset-recovery property from potential creditor claims. This subsection also provides priority rules for competing security interests in the nuclear asset-recovery property. Subsections (6) to (8) provides further guidance in connection with the transfer of nuclear asset-recovery property to an SPV.

Subsection (9) provides that the nuclear asset-recovery bonds are not debt of the state of Florida. An issue of such bonds does not obligate the state to levy any tax for its payment, although the state may provide bond guarantees or enhancements. Subsection (10) provides statutory authority for certain entities to invest in nuclear asset-recovery bonds. Subsection (11) provides a pledge from the state not to take actions to impair the value of the nuclear asset-recovery property. Subsections (12) to (15) include boilerplate provisions such as conflicts, severability and penalties for incompliance.

Duke Energy Florida's Financing Order and Bond Issuance

In November 2015, the Commission released Financing Order PSC-15-0537-FOF-EI to approve DEF's petition for the issuance of nuclear asset-recovery bonds in the amount of $1,283,012,000 plus financing costs. Under the financing order, DEF is authorized to impose a nuclear asset-recovery charge to repay the nuclear asset-recovery bonds and associated financing costs, which will be collected on a per-kWh basis from all applicable customer rate classes. The financing order authorizes DEF to impose the charge for a period not exceeding 276 months (23 years) from the issuance of the nuclear asset-recovery bond.

DEF created Duke Energy Florida Project Finance LLC for the issuance of of nuclear asset-recovery bonds in June 2016.

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

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CREDIT OPINION
18 February 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016A

Presale Report - Long Island Power Authority-Sponsored Securitization of Utility Cost Recovery Charge Assets

Capital Structure

Exhibit 1
Provisional (P) Ratings*

Series	Expected Amount	Tax Status	Interest Rate	Legal Maturity**	Provisional Ratings
2016A	[$381,730,000]	Tax-Exempt	Fixed	[12/15/2028]	(P) Aaa (sf)

The ratings address the expected loss posed to investors by the legal final maturity date. In Moody's opinion, the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the securitization. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors.
* Principal amounts and legal maturity dates are preliminary and subject to change
** Reflects the latest legal maturity date among the tranches in the series
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016, and Moody's Investors Service

Summary Rating Rationale

The Utility Debt Securitization Authority (the issuer) intends to issue Restructuring Bonds, Series 2016A. The bond issuance will enable the Long Island Power Authority (LIPA, Baa1 stable) to retire a portion of its outstanding debt. This will be the third utility cost recovery charge (UCRC) securitization that LIPA has sponsored since 2013. These bonds are backed by restructuring property which consists of, among other things, the right to impose usage-based restructuring charges on all current and future retail electric customers in LIPA's service area.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of LIPA's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 18 February 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

and diversity of the ratepayer base in LIPA's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the 2016A restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of Legislation and Financing Order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015 permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other UCRC securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to UCRC bondholders that it will not 1) take or permit any action that limits, alters or impairs the value of the restructuring property, or 2) except as required by the adjustment mechanism, reduce, alter or impair restructuring charges until the bonds have been repaid in full (the state pledge). In addition, the LIPA Reform Act and financing order contain the typical strong true-sale and security interest provisions.

LIPA's irrevocable financing order authorizes the creation of restructuring property, which grants the issuer the irrevocable right to impose, bill and collect irrevocable, non-bypassable restructuring charges based on electricity usage from all of LIPA's existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

The financing order authorizes LIPA to recover the costs of retiring certain of its outstanding debt and the issuer to recover the costs of issuing, supporting and servicing the bonds. The issuer will recover these costs by collecting restructuring charges until the bonds are repaid in full, without any specified time limit.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually, and if necessary, semiannually (and quarterly after the last scheduled maturity date of the bonds of any series), in each case to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time without limitation as to frequency, if the servicer deems necessary to ensure timely bond payments. New to the 2016A transaction, the servicer may elect to perform an additional voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). Also, the timing of the mid-year and annual true-ups has changed to help smooth charges over the course of the year.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in LIPA's service area is a credit strength. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (89%) and commercial customers (10%). Unlike most other UCRC securitizations, the service area includes very few industrial customers, which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Credit Challenges

Challenges to LIPA Reform Act and Financing Order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the securitizable restructuring property; however we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the LIPA Reform Act. Therefore, the only way to repeal or amend the LIPA Reform Act, or for LIPA to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws

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prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

Potential for Insufficient Collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration and self-generation. PSEG-LI's estimates of market demand, energy prices and growth within LIPA's service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur annually, semiannually and on an interim basis as needed.

Relatively High Restructuring Charge: LIPA expects the securitization's initial restructuring charge to represent around [0.79%] of the total monthly bill that an average 1,000 kilowatt hour (kWh) residential customer in LIPA's service area will receive as of June 1, 2016. The initial restructuring charge for the 2016A transaction, combined with the current restructuring charge for the 2013 and 2015 transactions, is expected to represent approximately [6.91%] of a typical residential customer's bill, and is relatively high compared to other utility cost recovery transactions. This concern is mitigated by LIPA's securitization offset rider, which reduces LIPA's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Exhibit 2

Asset Characteristics

Assets:	Restructuring property consisting of the issuer's irrevocable right to impose, charge and collect irrevocable, non-bypassable usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up adjustment mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full
Service Area:	Approximately 1.1 million customers in Nassau and Suffolk counties[1] and the Rockaway Peninsula

1. Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	[$381,730,000]1
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Collection Accounts and Debt Service Reserve Account
Sponsor/Seller/Initial Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority, a special purpose corporate municipal instrumentality of the State of New York
Operations Agent:	PSEG-Long Island
Trustee:	Bank of New York Mellon (Aa1/Aa2 stable, a1) 2

1. Preliminary and subject to change based on market conditions
2. The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Offering Statement dated February 18, 2016

Assets Overview

The collateral for this pool is the restructuring property consisting of the irrevocable right to impose, charge and collect non-bypassable, usage-based restructuring charges from all existing and future retail electric customers in LIPA's service area, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow LIPA to finance the retirement of a portion of its outstanding debt through the issuer's issuance of restructuring bonds, resulting in savings to LIPA's customers on a net present value basis. The securitization law gives LIPA the right to impose restructuring charges, which are the key asset of this securitization.

Prior to the legislature's amendment of the securitization law on March 26, 2015, the law permitted only one issuance of restructuring bonds by the issuer, and that issuance took place in December 2013 pursuant to Financing Order No. 1. The amended securitization law permits LIPA's Board of Trustees to adopt additional financing orders to, among other things, authorize the creation of additional restructuring property and the issuance of additional restructuring bonds in an aggregate additional amount not to exceed $4.5 billion (inclusive of the $2,022,324,000 previously issued 2013 restructuring bonds and the $1,002,100,000 previously issued 2015 restructuring bonds). After the 2016A issuance, LIPA will have authority to issue an additional [$1,093,846,000] billion of restructuring bonds under the securitization law.

Specifically, the securitization law coupled with the financing order authorizes LIPA to sponsor multiple bond issuances to finance the recovery of the costs of retiring a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds.

Similar to other UCRC securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that will be incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

Specifically, the State of New York pledges to and agrees with the bondholders, the issuer and LIPA that the State will not in any way: 1) take or permit any action that limits, alters or impairs the value of the restructuring property; or 2) except as required by the adjustment mechanism authorized by the securitization law and set forth in the financing order, reduce, alter or impair restructuring charges that are imposed, collected and remitted for the benefit of the bondholders until all principal of and interest on the bonds and all ongoing financing costs have been repaid in full.

The state pledge provides protection to bondholders; to the extent LIPA or the State of New York have obligations under the financing order, the LIPA Reform Act provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to change the securitization law would be through a legislative action which would be subject to the state pledge.

The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims.

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

Hawkins Delafield & Wood LLP, LIPA's special counsel, will provide a legal opinion prior to securitization closing to the effect that the bondholders (or the trustee acting on their behalf) could successfully challenge under the contracts clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Hawkins Delafield & Wood LLP, LIPA's bond counsel, will provide a legal opinion prior to securitization closing to the effect that under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The Financing Order

The securitization law authorizes LIPA's securitization program, while a separate financing order implements each issuance of bonds under the program.

On June 26, 2015, LIPA Trustees adopted Financing Order No. 3 (the financing order), together with Financing Order No. 2 and Financing Order No. 4 and on July 15, 2015, the New York Public Authorities Control Board approved them. On August 14, 2015, they became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, and the 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property.

The issuer is issuing the 2016A restructuring bonds pursuant to Financing Order No. 3, which authorizes: 1) the creation of the 2016A restructuring property; 2) LIPA to sell the 2016A restructuring property to the issuer under the financing order (the 2016A restructuring property is created simultaneously with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the 2016A restructuring property from LIPA and pay upfront financing costs; and 6) LIPA to use the proceeds of the sale of the 2016A restructuring property to retire a portion of its outstanding debt

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with LIPA setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of LIPA to review and approve the issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The 2016A Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and non-bypassable restructuring charges from all of LIPA's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism to ensure the expected collection of amounts sufficient to pay the amounts specified above on time. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from LIPA's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the Public Service Commission.

Restructuring Charges are Non-Bypassable

The securitization law provides that the restructuring charges are non-bypassable. "Non-bypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (LIPA's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if LIPA no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

Self-Generation in the Service Area is Low

Self-generation, which primarily includes solar and wind, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Self-generation is currently very small in the service area at roughly 0.3% of energy sales. LIPA forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. Certain customers that self-generate will only be responsible for paying restructuring charges based upon their "net-billed" consumption.

Municipalization

Municipalization, or the transfer of the T&D system assets to a municipal owner, would not affect restructuring charge collections because the customers are required to pay the restructuring charges even if the T&D system assets are no longer owned by LIPA. Since 1998, no municipalizations have occurred.

The Service Area

LIPA provides electric transmission and distribution services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which LIPA provided electric transmission and distribution services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. Of these, approximately 89.3% were residential, 10.2% commercial (with very few industrial customers), 0.5% street lighting and 0.0% other public authorities; the average number of customers has been fairly stable over the last 10 years, with very small year-over-year changes ranging from -0.2% to 0.7%. Retail electric usage was 48.2% residential, 48.8% commercial, 0.7% street lighting and 2.2% other public authorities.

In the year ending December 31, 2015, LIPA's largest customer, the Long Island Rail Road, accounted for less than 2.0% of LIPA's total sales, and LIPA's top 10 customers accounted for approximately 7.0% of LIPA's total sales.

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs (the revenue requirement)

3. mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
5. more frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. after the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Under the financing order, the adjustments are to be based on actual charge collections and the servicer's updated assumptions for projected future charge collections, projected uncollectibles and loss in collection of billed charges, and future payments and expenses relating to the restructuring property and the bonds.

No Third-Party Billing/Collection of Charges

Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor regulator, and any owner of the T&D system assets will take steps to ensure non-bypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor regulator will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

Assets Analysis

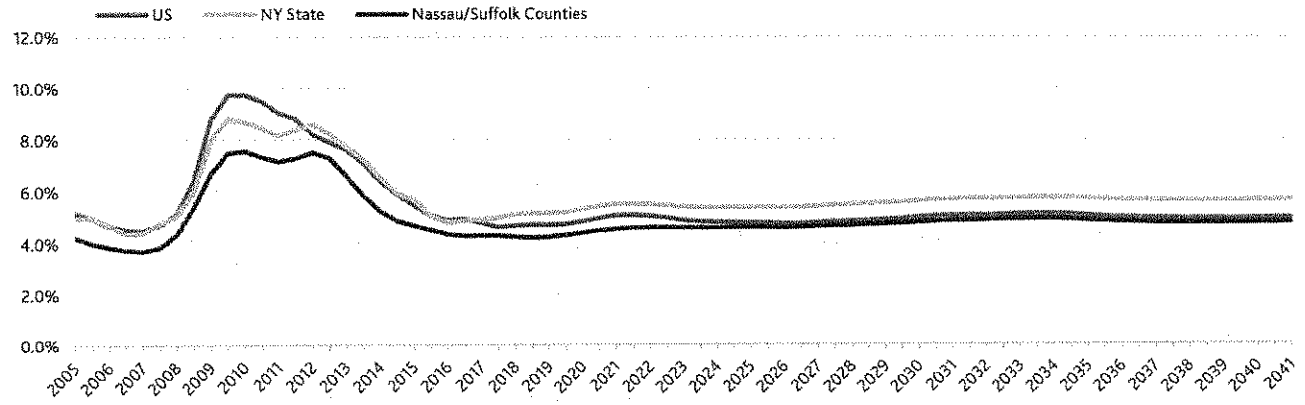
Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, 19 colleges and universities and core research institutions, such as Brookhaven National Laboratory, Cold Spring Harbor Laboratory, and the technology and science developmental centers at Stony Brook and Farmingdale Universities that specialize in the areas of biotechnology, computer sciences, wireless and internet technologies, and energy.

Long Island's median household income is substantially above that of New York and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $98,401 and $88,323, respectively, considerably higher than the $58,687 for New York and the $53,482 for the US. According to LIPA, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 4 shows that the Nassau-Suffolk unemployment rate is lower than that of the US, and we forecast the rate will remain lower.

Exhibit 4
Unemployment Rate*



* Data does not include the Rockaways, Queens, which is also part of the service area.
Source: US Bureau of Labor Statistics and Moody's Analytics

Exhibit 5 shows Moody's Analytics' forecasted average year-over-year changes in various economic stability measures for the service area, compared with New York and the US. The data include Nassau and Suffolk counties, but exclude the Rockaways in Queens, NY. The exhibit shows that forecasted population growth will be relatively flat.

Exhibit 5
Forecasted Average Year-Over-Year Changes in Population and Economic Stability Measures
(Data for 2016-2041, the scheduled maturity date of the bonds)

	Nassau-Suffolk *	New York	US
Population	0.1%	0.1%	0.7%
Households	0.3%	0.4%	0.9%
GDP (Chained 2009 $)	1.6%	1.4%	2.0%
Per Capita Income	3.3%	3.6%	3.6%
Employment (non-farm payroll)	0.5%	0.5%	0.8%

* Does not include the Rockaways, Queens, which is part of the service area
Source: Moody's Analytics

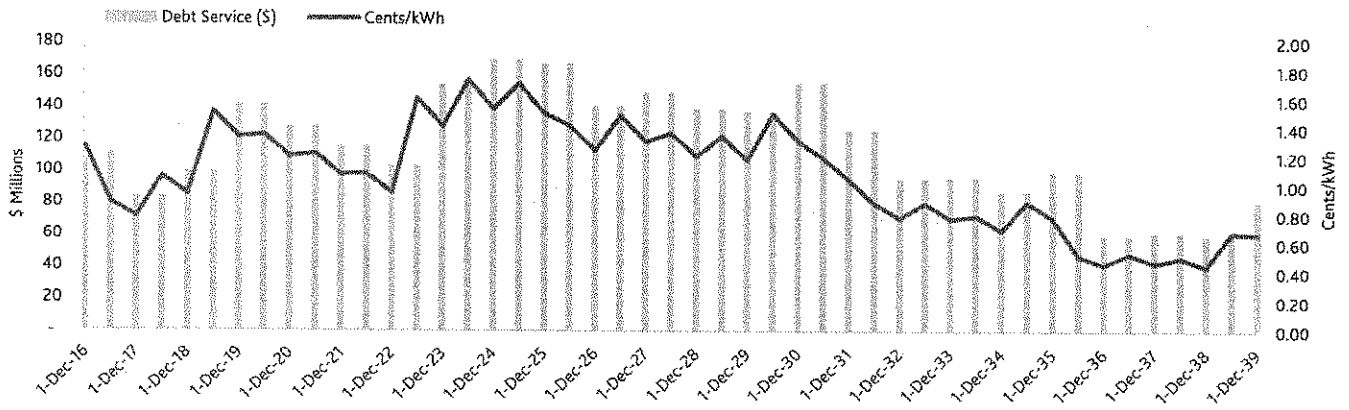
Remote Risk of Severe Ratepayer Base Declines

The securitization's performance is exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's diverse ratepayer base.

LIPA expects the combined initial restructuring charge for the 2013, 2015 and 2016A transactions to be around [6.91%] of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 1, 2016, which is higher than most other UCRC securitizations we rate. The [6.91%] is preliminary and subject to change based on market conditions.

Exhibit 6 shows LIPA's expected restructuring charge, which is the same for all customer classes, and annual debt service of the bonds over the securitization's life. The exhibit shows that the restructuring charge will vary over time to cover the unlevel debt service of the bonds, which mirrors the unlevel debt service of the retired LIPA bonds.

Exhibit 6
Restructuring Charge (Cents/kWh) and Annual Debt Service*



* Preliminary and subject to change based on market conditions.
Source: LIPA; Moody's calculations

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a typical residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand.

Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We looked at three scenarios. In our base case, we assumed 1) electricity consumption as per LIPA's projections, 2) annual net charge-offs as per LIPA's projections, 3) collection curve as per LIPA's projections and 4) actual servicing fee and other expenses (Scenario A).

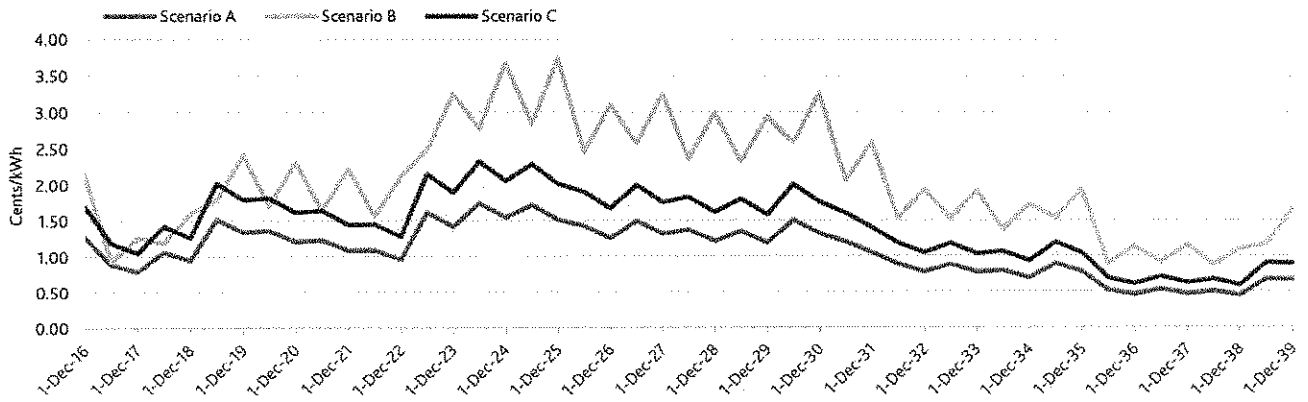
In our first stress scenario, we assumed 1) electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers, 2) annual net charge-offs are the same as in base case, 3) collection curve is the same as in base case, 4) loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year and 4) replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case (Scenario B).

In our second stress scenario, we assumed 1) electricity consumption is reduced by 25% permanently against the first year base case projection, 2) annual net charge-offs the same as in base case, 3) collection curve is the same as in base case and 4) servicing fee and all other fees the same as in base case (Scenario C).

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 7 shows the projected restructuring charges for customers in cents per kWh, and Exhibit 8 shows the projected restructuring charge as a percentage of the typical residential customer's total bill assuming monthly usage of 1,000 kWh over the securitization's life.

Exhibit 7

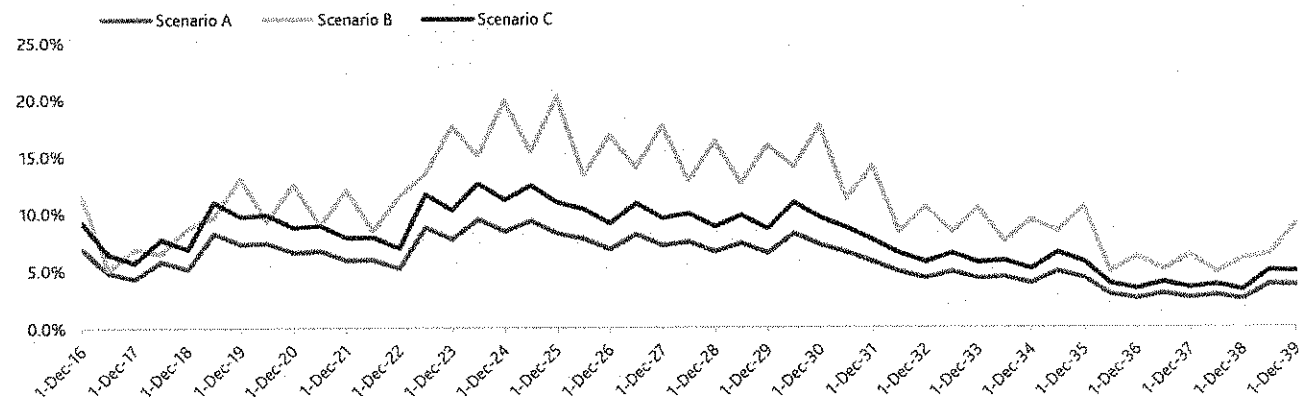
Restructuring Charge (Cents/kWh)



Source: LIPA and the servicers; Moody's calculations

Exhibit 8

Restructuring Charge as a Percentage of a Typical Residential Customer's Total Bill



Source: LIPA and the servicers; Moody's calculations

Forecasting Electricity Consumption

The company monitors the accuracy of each forecast by conducting variance analysis on a monthly basis taking into account weather impacts on kWh sales and deviations from forecast within the customer count. LIPA factors the impact of weather and the growth in self generation, energy efficiencies and the use of electric vehicles into its forecasts.

Exhibit 9 shows LIPA's annual forecast variance for ultimate electric delivery by customer class.

Exhibit 9

Annual Forecast Variance for Ultimate Electric Delivery (MWh)

	2011	2012	2013	2014	2015
Residential	4.3%	-2.4%	-2.7%	-4.3%	0.5%
Commercial	-1.0%	-3.6%	-2.4%	-1.7%	-2.1%
Street Lighting	0.2%	-2.2%	-4.4%	1.7%	-3.8%
Other Public Authorities	5.5%	-13.6%	-4.2%	3.1%	2.5%
Total	1.6%	-3.2%	-2.6%	-2.8%	-0.8%

Note: Negative variance means that the actual electric delivery is lower than the forecasted electric delivery.
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Additional Assets Analysis

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, LIPA or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

PSEG LI will perform, and is capable of performing, LIPA's key servicing duties, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among other things. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

PSEG is a publicly traded energy and energy services company. As of September 30, 2015, it had total assets of approximately $36.5 billion, latest twelve months revenues of approximately $10.9 billion; and employed approximately 12,700 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company (PSE&G), New Jersey's largest regulated electric and gas transmission and distribution utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets, pursuant to the securitization documents.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Loss Experience

Exhibit 10 shows the annual net charge-offs for LIPA, including net charge-offs of customers as part of LIPA's annual charge-off reconciliation process.

Exhibit 10

Net Charge-Offs as a Percentage of Total Billed Retail Electricity Service Revenues

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Billed Electric Revenues ($000)	3,620,532	3,413,091	3,834,255	3,753,765	3,572,133
Net Charge-Offs ($000)	24,753	19,750	20,969	24,659	23,948
Percentage of Billed Revenue	0.68%	0.58%	0.55%	0.66%	0.67%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Days Sales Outstanding

Exhibit 11 shows the average number of days that LIPA's bills remained outstanding during each of the calendar years below.

Exhibit 11

Average Days Sales Outstanding

	As of 12/31/2011	As of 12/31/2012	As of 12/31/2013	As of 12/31/2014	As of 12/31/2015
Average Days Sales Outstanding	38.55	39.23	39.40	37.13	36.78

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Delinquency Experience

Exhibit 12 shows the delinquency experience of LIPA during each of the calendar years below.

Exhibit 12
Average Monthly Delinquencies of Total Annual Billed Retail Electricity Delivery Service Revenues

	2011	2012	2013	2014	2015
30-59 days	$ 52,766	$ 50,348	$ 59,196	$49,980	$42,775
60-89 days	$ 28,940	$ 28,018	$ 32,104	$24,937	$21,223
90+ days	$108,208	$116,791	$135,828	$86,419	$87,580

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Securitization Structure Overview

LIPA intends to issue one series of tax-exempt, fixed rate bonds, Series 2016A, secured by the collateral on a pari passu basis. Some of the Series 2016A Bonds will be serial bonds, while others will be term bonds, with the term bonds subject to mandatory sinking fund payments. The issuer will have the option to redeem the Series 2016A Bonds with a legal final maturity date on or after [ ], in whole or in part and in any order, on and after [ ]. *All dates in this paragraph will be determined prior to closing.*

Securitization Structure Description

Bond Structure

The issuer will make payments on the bonds semiannually, on June 15 and December 15 of each year, beginning in December 2016. Interest will be paid pro rata among the tranches.

All tranches of bonds will be paid pro rata if the bonds are accelerated following an event of default under the indenture. Partial payments of any scheduled payments will be allocated pro rata between tranches of bonds with the same legal final maturity date.

Optional Redemption

The issuer will not have the option to redeem the Series 2016A Bonds with a final maturity date prior to [ ]. The issuer will have the option to redeem the Series 2016A Bonds with a final maturity date on or after [ ], in whole or in part and in any order, on and after [ ], at a redemption price of 100% of the principal amount of the Series 2016A Bonds to be redeemed, plus accrued interest to the redemption date. *All dates in this paragraph will be determined prior to closing.*

Indenture Accounts

The trustee will hold the collection account in its name and will deposit the restructuring charge collections and all other amounts it receives with respect to the collateral. The collection account will consist of five subaccounts: the general subaccount, the excess funds subaccount, the operating reserve subaccount, the debt service reserve subaccount and the upfront financing cost subaccount.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other ongoing financing costs to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;

6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;
7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates.

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

The annual true-up adjustment will be calculated to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment.

Events of Default

The Events of Default under the indenture are:

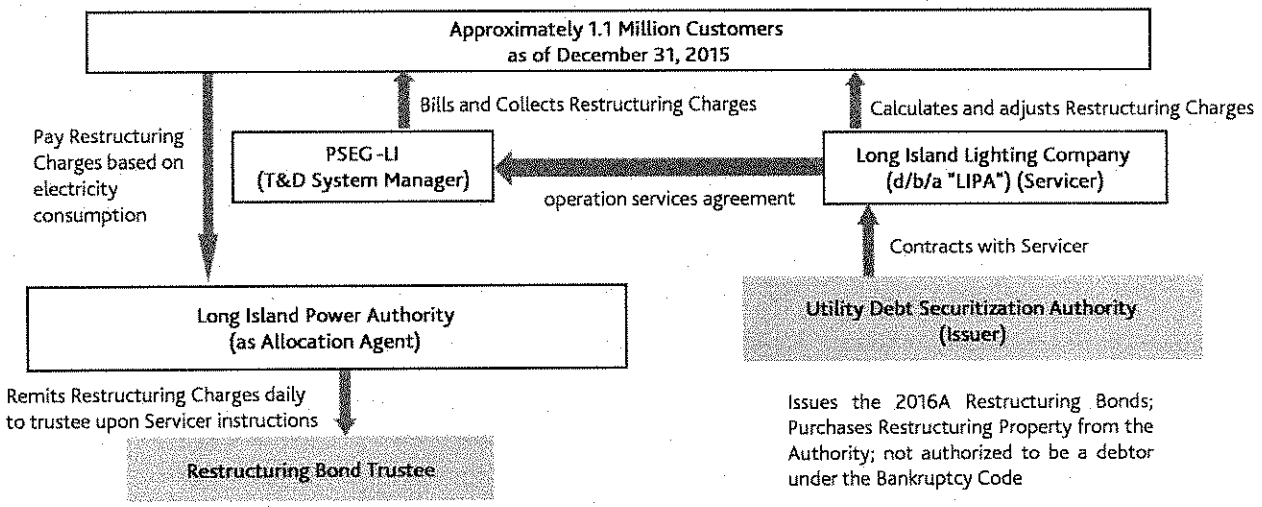
1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period); or
5. an action violating the financing order or state pledge.

Securitization Structure Analysis

Securitization Parties and Responsibilities

Exhibit 13 provides a general summary of the key securitization parties, their roles and their various relationships to the other parties.

Exhibit 13
Securitization Parties and Responsibilities

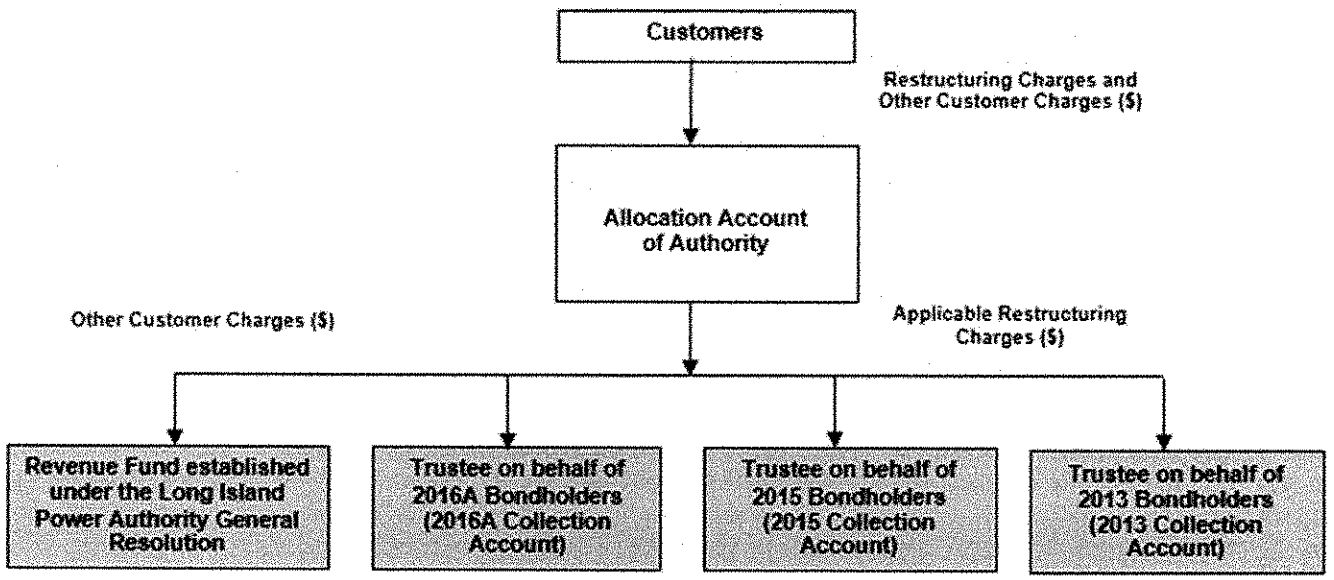


Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Flow of Funds

Exhibit 14 shows a general summary of the securitization's flow of funds: PSEG-LI will bill and collect the restructuring charges from LIPA's customers on behalf of the servicer. The servicer will be required to cause all customer payments (including restructuring charge collections) to be deposited into the allocation account, which LIPA established to hold all payments until the checks clear. Initially, the account will be held by J.P. Morgan Chase Bank. If customers make payments directly to the servicer instead of to the allocation account, the servicer must remit such payments to the allocation account within two business days' receipt by the servicer or LIPA. LIPA, as allocation agent, will control and administer the allocation account for the benefit of the trustee for the holders of the bonds and the trustee for the holders of LIPA bonds. On each business day, the allocation agent must transfer to the collection account the amount of restructuring charge collections that the servicer estimates to have been received and deposited into the allocation account on such day.

Exhibit 14
Flow of Funds



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016A Preliminary Official Statement dated February 18, 2016

Legal Structure

The primary steps of the securitization are as follows:

1. The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under chapter 9 or any other provision of the Bankruptcy Code. The securitization law formed the issuer solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.
2. The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from LIPA and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.
3. LIPA will use the proceeds from the sale of its restructuring property to retire certain of its outstanding debt. LIPA will act as the servicer of the restructuring property under a servicing agreement with the issuer and as the issuer's administrator under an administration agreement with the issuer. PSEG-LI will act as LIPA's service provider and will perform LIPA's key servicing duties under an operations servicing agreement with LIPA.

Sponsor and Seller

LIPA will be the securitization's sponsor and the seller of the restructuring property. LIPA is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a chapter 9 debtor pursuant to its enabling legislation.

LIPA took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of LIPA through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

LIPA is governed by a Board of Trustees (LIPA Trustees) and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. LIPA is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

Pursuant to LILCO's organizational documents, LIPA conducts and manages LILCO's business and affairs. Accordingly, LILCO is controlled by LIPA.

LIPA and LILCO are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LILCO conducts the electric business in the service area and is responsible for providing service to customers in the service area. LIPA and LILCO are also parties to an administrative services agreement pursuant to which LIPA provides personnel, personnel-related services and other services necessary for LILCO to provide electric service in the service area.

To assist LIPA (acting through LILCO) in providing electric service in the service area, LIPA and LILCO have entered into operating agreements to provide them with the operating personnel and a significant portion of the power supply resources necessary for LILCO to continue to provide such electric service. From 1998 through 2013, National Grid plc, certain of its subsidiaries (National Grid subs) or their predecessors performed most such operations.

Beginning in 1998, a National Grid sub was the manager of LILCO's electric T&D system under a management services agreement which expired at the end of 2013. Beginning January 2014, PSEG-LI assumed the role from the National Grid sub. T&D system management services include, among other functions, the day-to-day operation and maintenance of the T&D system, customer service, billing and collection, meter reading and forecasting energy consumption.

In July 2013, New York Governor Andrew Cuomo signed the LIPA Reform Act, codified as Chapter 173, Laws of New York, into law. On March 30, 2015, the New York State Assembly and Senate adopted Chapter 58 of the Laws of New York, 2015, which amended the LIPA Reform Act to authorize the issuer to issue additional restructuring bonds. On April 13, 2015, the Governor signed Chapter 58 into law. On May 13, 2015, the time for filing any challenges to the LIPA Reform Act, as amended, expired and no such challenges were filed.

The LIPA Reform Act effectively shifted the major operational and policy-making responsibilities for the T&D system, including significant responsibilities relating to capital expenditures, budgets and emergency response, from LIPA to PSEG-LI. PSEG-LI's scope of services and LIPA's reserved rights have been adjusted to reflect the shift in operations, management and policy making responsibilities while enhancing LIPA's oversight rights. The LIPA Reform Act also requires that staffing be kept at levels only necessary to ensure that LIPA is able to meet obligations with respect to its bonds and notes and all applicable statutes and contracts, and to oversee the activities of PSEG-LI.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

MOODY'S INVESTORS SERVICE

CREDIT OPINION
29 July 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Utility Debt Securitization Authority Restructuring Bonds, Series 2016B

Long Island Power Authority-Sponsored Utility Cost Recovery Bonds

Capital Structure

Exhibit 1

Provisional (P) Ratings*

Series	Provisonal Rating	Expected Amount	Tax Status	Coupon	Payment Frequency	Expected Maturity	Legal Final Maturity**
Series 2016B	(P)Aaa (sf)	$475,000,000	Tax Exempt	Fixed	Semi-annual	12/15/2033	12/15/2035

The ratings address the expected loss posed to investors by the legal final maturity. In our opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Our ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.

* Principal amounts and legal maturity dates are preliminary and subject to change

** Reflects the latest legal maturity date among the tranches in the series

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Summary Rating Rationale

We have assigned provisional ratings to the single series of bonds (Series 2016B bonds, or the bonds) that Utility Debt Securitization Authority (the issuer) will issue. The Long Island Power Authority ("the Authority", Baa1 stable), which is a corporate municipal instrumentality and a political subdivision of the State of New York, is sponsoring the transaction. The Authority wholly owns the Long Island Lighting Company (doing business as "LIPA", the servicer), which provides electric transmission and distribution services in most of Nassau and Suffolk counties and a portion of Queens county. New York State legislation formed the issuer to securitize a special charge (the restructuring charge) imposed on the Authority's customers' utility bills. The Authority will use the proceeds of the securitization to retire a portion of its outstanding debt. The Series 2016B bonds will be the fourth utility cost recovery bonds sponsored by the Authority since 2013.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 28 July 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

The primary collateral backing the Series 2016B bonds is the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area (the restructuring property). New York State legislation, along with an irrevocable financing order adopted by the Authority on June 26, 2015, authorizes the creation of the restructuring property.

Our provisional ratings on the bonds reflect our assessment of (1) the strength of the State of New York's legislation including the State's non-impairment pledge, which strongly protects the restructuring property backing the bonds; (2) the strength of the Authority's irrevocable financing order authorizing the creation of the restructuring property; (3) the size, stability and diversity of the ratepayer base in the Authority's service area; (4) the ability and experience of LIPA, who is responsible for the billing and collection of the restructuring charges, as the initial servicer of the restructuring property, and of PSEG Long Island LLC (PSEG-LI), who will perform LIPA's key servicing functions; and (5) the credit enhancement supporting the bonds in the form of a mandatory uncapped true-up mechanism that periodically adjusts the restructuring charges to ensure timely bond payments until the bonds are repaid in full, a non-declining operating reserve account and a debt service reserve account.

Credit Strengths

Strength of legislation and financing order: The State of New York's legislation (Part B of the LIPA Reform Act, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on August 14, 2015, permits the securitization and strongly protects the restructuring property securing the bonds. Similar to other utility cost recovery charge securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of New York pledges to bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order (the state pledge). In addition, the securitization and financing order contain the typical true-sale and security interest provisions.

The Authority's irrevocable financing order authorizes the Authority to recover specified costs of retiring its corporate debt by collecting restructuring charges. The restructuring property grants the issuer the irrevocable right to impose, bill and collect irrevocable, nonbypassable restructuring charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. Nonbypassable refers to the requirement that the charges be levied on all of the Authority's existing and future retail electric customers receiving transmission and distribution services in its service area, including customers of any Authority successor or assignee.

True-up adjustment mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts restructuring charges annually and, if necessary, semiannually, to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments at any time if the servicer deems necessary to ensure timely bond payments. The servicer may also elect to perform a voluntary mid-year true-up adjustment to decrease charges to customers to correct for overcollections in any year (in addition to the requirement that the servicer perform a mandatory mid-year adjustment to increase charges to customers to correct for undercollections). This voluntary mid-year adjustment helps reduce the volatility of the restructuring charge to customers. The inclusion of an operating reserve account and a debt service account provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between true-ups.

Affluent ratepayer base: The size, economic stability and diversity of the ratepayer base in the Authority's service area are credit strengths. The service area is fixed by the securitization law and primarily includes the Long Island counties of Nassau and Suffolk, which are two of the most affluent counties in the United States. The service area primarily includes a mix of residential customers (54% by revenue) and commercial customers (43% by revenue).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

Experienced servicer: LIPA has considerable prior servicing experience with restructuring charges, including acting as servicer for the Authority's three outstanding utility cost recovery charge securitizations.

Although LIPA is the named servicer for this securitization, PSEG Long Island LLC (PSEG-LI, unrated), a subsidiary of Public Service Enterprise Group Incorporated (Baa2, positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others. PSEG-LI currently performs these same functions for the three outstanding utility cost recovery charge securitizations sponsored by the Authority. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

Credit Challenges

Challenges to securitization law and financing order: Potential state and federal legislative and regulatory actions could weaken the strength of the legal protections of the restructuring property. However, we view this risk as remote. New York does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for the Authority to amend or revoke the financing order, would be through a legislative action which would violate the state pledge. The risk that the State of New York would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered. Several past challenges to securitization laws such as this in other jurisdictions have been unsuccessful.

Potential for insufficient collections: Collections arising from the restructuring property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. The Authority's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, by which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments are required to occur annually and can occur semi-annually and at the discretion of the servicer on an interim basis as needed.

Relatively high restructuring charge: The Authority expects the securitization's initial restructuring charge to represent around 2.55% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in the Authority's service area will receive as of June 15, 2017. The initial restructuring charge for the 2016B transaction, combined with the current restructuring charge for the 2013, 2015 and 2016A transactions, is expected to represent approximately 7.8% of a 1,000 kWh residential customer's bill. This percentage charge is relatively high compared to charges in other utility cost recovery bond transactions. For context, the three most recent utility cost recovery bond issuances we rated, Duke Energy Florida Project Finance, LLC, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 2.5%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively. A high cumulative recovery charge could incentivize a legal challenge to the restructuring charges or the securitization law, or could increase political pressure to rescind or change the securitization law through legislation. This concern is mitigated by the Authority's securitization offset rider, which reduces the Authority's delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Restructuring property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from the Authority or its successors or assignees
Service Area:	The Authority's service area covers approximately 1.1 million residential, commercial customers in Nassau and Suffolk counties* and the Rockaway Peninsula

*Excludes the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Tax-exempt, fixed rate bonds with semi-annual payments
Amount:	$475,000,000*
Structure:	Discrete trust
Credit Enhancement:	Mandatory uncapped true-up mechanism; operating reserve account (0.5%); debt service reserve account (1.5%)
Transaction Parties	
Sponsor/Depositor/Servicer:	Long Island Power Authority (Baa1 stable)
Issuer:	Utility Debt Securitization Authority
Transmission and Distribution System Manager:	PSEG Long Island LLC (unrated)
Trustee:	The Bank of New York Mellon Trust Company, National Association (Aa1/Aa2 stable, a1)**

*Preliminary and subject to change based on market conditions
**The bank ratings shown in this report are the banks' deposit ratings and senior unsecured debt ratings and outlooks, and their baseline credit assessments
Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Overview

The collateral for this pool is the restructuring property, consisting of the irrevocable contract right to impose, bill and collect nonbypassable consumption-based restructuring charges from all existing and future retail electric customers taking electric transmission or distribution service within the Authority's service area.

The bonds are also secured by funds on deposit in the collection account, including the debt service reserve subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds with respect to the pledged collateral.

Assets Description

The Securitization Law

The purpose of the securitization law is to create the issuer and allow the Authority to finance the retirement of a portion of its outstanding debt through the issuance of restructuring bonds by the issuer, resulting in savings to the Authority's customers on a net present value basis. The securitization law gives the Authority the right to impose restructuring charges, which is the key asset backing this securitization.

The securitization law, coupled with the adoption of additional financing orders, authorizes the Authority to create additional restructuring property as collateral for the issuance of bonds. The Authority will use this issuance to retire a portion of its outstanding debt and financing costs, including the costs of issuing, supporting and servicing the bonds. The current financing order allows for an aggregate amount not to exceed $4.5 billion (inclusive of the previously-issued bonds: $2,022,324,000 in 2013, $1,002,115,100 in 2015 and $636,770,000 in 2016). After the Series 2016B issuance, the issuer has capacity issue an additional $363.8 million of restructuring bonds under the initial authorization.

Similar to other utility cost recovery charge securitizations, this securitization benefits from the securitization law's inclusion of a state non-impairment pledge, subject to the true-up mechanism, that is incorporated into the securitization documents for the benefit of the trustee on behalf of bondholders. A breach of such pledge triggers an event of default under the indenture.

The Financing Order

On June 26, 2015, the Authority adopted Financing Order No. 4 (the financing order), together with Financing Order No. 2 and Financing Order No. 3; all of which were approved by the New York Public Authorities Control Board on July 15, 2015. On August 14, 2015, the financing orders became irrevocable, final and non-appealable. Each financing order authorizes restructuring bonds that will be secured by a separate restructuring property that would be created pursuant to that financing order.

Similarly, the Series 2013 restructuring bonds that the issuer issued pursuant to Financing Order No. 1 are secured by the 2013 restructuring property, the Series 2015 restructuring bonds that the issuer issued pursuant to Financing Order No. 2 are secured by the 2015 restructuring property and the Series 2016A restructuring bonds that the issuer issued pursuant to Financing Order No. 3 are secured by the 2016A restructuring property.

The issuer is issuing the bonds pursuant to the financing order, which authorizes: 1) the creation of the restructuring property; 2) the Authority to sell the restructuring property to the issuer under the financing order (the restructuring property is created simultaneous with its sale to the issuer); 3) the imposition, billing and collection of restructuring charges on, to and from the customers in the service area; 4) the issuance of the bonds by the issuer; 5) the issuer to use the bond proceeds to purchase the restructuring property from the Authority and pay upfront financing costs; and 6) the Authority to use the proceeds of the sale of the restructuring property to retire a portion of its outstanding debt.

The securitization law provides that the financing order is irrevocable and is not subject to modification or termination. The financing order acknowledges the state pledge.

Prior to the issuance of the bonds, the financing order requires the servicer to file an issuance advice letter with the Authority setting forth: 1) the expected savings to customers from the securitization; 2) the estimated ongoing financing costs; 3) the initial restructuring charge; and 4) the final terms of the bonds. The financing order authorizes a designee of the Authority to review and approve the

issuance advice letter for the purpose of confirming that the stated terms are consistent with the financing order. The designee's approval will be final and incontestable.

The State Pledge

The securitization law includes a pledge from the State of New York to the bondholders that it will not (1) take or permit any action that limits, alters or impairs the value of restructuring property; or (2) reduce, alter or impair transition charges that are imposed, collected and remitted for the benefit of the owners of restructuring bonds, any assignee, and all financing entities, until any principal, interest and redemption premium in respect of restructuring bonds, all ongoing financing costs and all amounts to be paid to an assignee or financing party under an ancillary agreement are paid or performed in full, except as required by the adjustment mechanism described in the restructuring cost financing order.

Any action of the New York legislature adversely affecting the restructuring charges or the ability to impose, charge or collect the restructuring charges would likely require the State of New York to pay just compensation under the "takings clause" of the United States and State of New York Constitutions.

The state pledge provides protection to bondholders. To the extent the Authority or the State of New York have obligations under the financing order (e.g. to file for true-up adjustments), the securitization law provides that the owner of the restructuring property (the issuer), or the trustee representing the bondholders, are expressly permitted to bring actions for enforcement of the financing order.

The Restructuring Charges

Under the financing order, the servicer (on behalf of the issuer as owner of the restructuring property) has the right to impose, bill and collect irrevocable and nonbypassable restructuring charges from all of the Authority's customers in an amount sufficient to: 1) pay interest on the bonds when due and principal of each tranche of bonds according to the related expected amortization schedule; 2) pay the fees and expenses of the securitizations' service providers; and 3) replenish the operating reserve and debt service reserve subaccounts to the required levels.

There is no cap on the level of restructuring charges that the servicer may impose on ratepayers through the true-up adjustment mechanism. This is designed to ensure the expected collection of amounts sufficient to timely pay the amounts specified above. Accordingly, the restructuring charges may continue to be imposed and collected until the bonds are repaid in full, without any specified time limit.

The financing order authorizes the servicer to collect restructuring charges directly from the Authority's customers. The restructuring charge will be the same for all customer classes. Under the securitization law, the charges and any adjustments thereto are not subject to review or regulation by the New York State Department of Public Service, the staff arm of the New York Public Service Commission.

The restructuring charges are nonbypassable; "nonbypassable" as set forth in the securitization law and the financing order means that the customer is obligated to pay the restructuring charges (and may not legally avoid payment of such charges) as long as such customer is connected to the transmission and distribution (T&D) system assets (the Authority's delivery system, which includes transmission and distribution lines and substations) and is taking electric delivery service in the service area, even if such customer produces its own electricity or purchases electric generation services from a provider of electric generation services other than the owner of the T&D system assets and even if the Authority no longer owns the T&D system assets. Thus, the only way customers can avoid restructuring charges is if they are fully cut off from the T&D system assets.

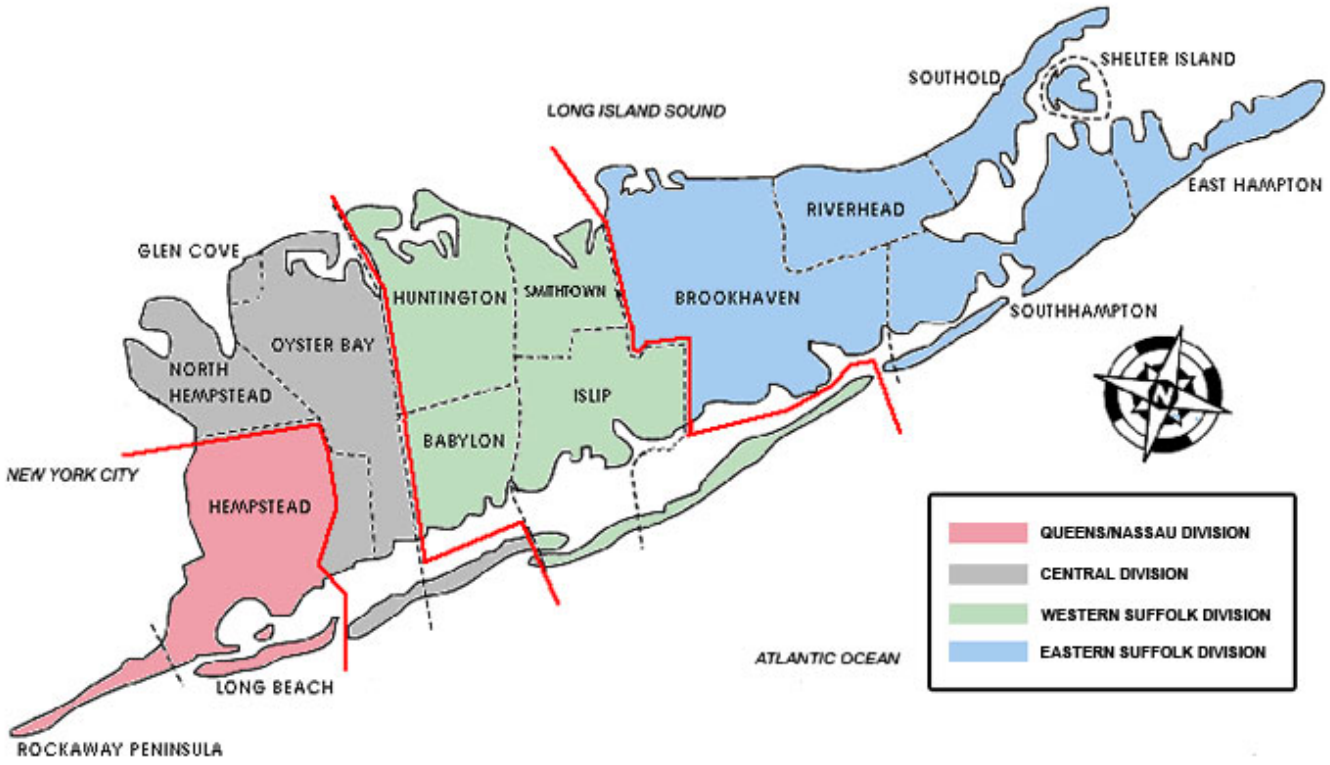
The Service Area

The Authority provides electric T&D services in its service area which includes two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. The population of the service area is around three million.

The securitization law defines the service area as the geographical area within which the Authority provided electric T&D services as of July 29, 2013. Thus, the service area is fixed by the legislation.

As of December 31, 2015, the service area included approximately 1.1 million customers. In 2015, retail electric usage was 54.4% residential, 43.5% commercial, 0.7% street lighting and 1.5% other public authorities. Exhibit 4 below shows the service area.

Exhibit 4
LIPA Service Area



Source: PSEG-LI website

Statutory Uncapped True-Up Adjustment Mechanism

Under the securitization law and the financing order, the servicer will adjust the restructuring charges through the securitization's true-up mechanism to ensure timely bond payments. The adjustments to the charges will continue until the bonds are repaid in full and there is no cap on the amount of charges that may be imposed on customers resulting from the adjustments.

The mechanics of the true-up adjustments are as follows:

1. Initial true-up adjustment to the restructuring charges will be made on November 15, 2016
2. Standard mandatory annual adjustments to the restructuring charges to correct for any over-collections or under-collections to date and anticipated to be experienced up to the date of the next annual adjustment and to ensure that the expected collections are sufficient to timely pay interest and scheduled principal (according to the expected amortization schedule) on the bonds and all other ongoing financing costs
3. Mandatory semiannual adjustments to the restructuring charges only if the servicer forecasts that charge collections will be insufficient to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
4. Voluntary semiannual adjustments to decrease the restructuring charges to customers if the servicer forecasts that charge collections will be greater than the amount required to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs

5. More frequent adjustments at any time without limits as to the frequency to ensure that the expected charge collections are adequate to ensure timely payment of interest and scheduled principal on the bonds and all other ongoing financing costs
6. After the last scheduled maturity date of the bonds (of any series), quarterly adjustments to ensure that charge collections will be sufficient to timely pay interest and principal on the next payment date, in addition to all other ongoing financing costs; the adjustments will be set at levels estimated to generate revenues sufficient to fully repay the bonds on the next payment date, plus all other ongoing financing costs

All adjustments will be designed to cause: 1) the outstanding principal balance of the bonds (or any series of bonds) to be equal to the scheduled balance (based on the expected amortization schedule); 2) the amount in the operating reserve and debt service reserve subaccounts to be equal to the required levels; and 3) with respect to the annual true-up only, any amount in the excess funds subaccount to be equal to zero by the payment date immediately preceding the effective date of the next annual adjustment.

Servicing

LIPA, acting as servicer under the servicing agreement, or any successor servicer as the financing order provides, will be responsible for servicing the restructuring property, including: 1) obtaining meter reads; 2) forecasting electricity usage; 3) calculating, billing and collecting the restructuring charges; 4) processing, accounting for and depositing charge collections and making periodic remittances; 5) calculating and implementing the true-up adjustments to the restructuring charges; 6) investigating and handling delinquencies and selling defaulted or written off accounts; 7) responding to inquiries from customers, the Authority, or any governmental authority regarding the restructuring property and the restructuring charges; and 8) furnishing periodic reports and statements.

Although LIPA is the named servicer for this securitization, PSEG-LI, a subsidiary of Public Service Enterprise Group Incorporated (PSEG, Baa2 positive), will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting the restructuring charges, meter reading and forecasting electricity usage, among others. PSEG is a publicly traded energy and energy services company. As of December 31, 2015, it had total assets of approximately $37.5 billion, last twelve months revenues of approximately $10.4 billion; and employed approximately 13,000 people. PSEG is the parent holding company of PSEG Power LLC, New Jersey's largest wholesale merchant generator with approximately 13.1 GW of capacity; Public Service Electric and Gas Company, New Jersey's largest regulated electric and gas T&D utility; and PSEG Energy Holdings L.L.C., which owns a portfolio of leveraged leases and is also pursuing investments in renewable generation.

There is no named backup servicer at closing though the financing order allows for a replacement servicer if the current servicer defaults in its performance obligations. In addition, the financing order allows the servicing fee to step-up from 0.05% to 0.60% of the initial principal balance of the bonds if LIPA is replaced as servicer by a successor servicer not affiliated with the owner of the T&D system assets.

Billing

PSEG-LI will perform LIPA's duties of billing and collecting the restructuring charges, meter reading and forecasting electricity usage. LIPA will be responsible for the true-up adjustments and certain reporting requirements.

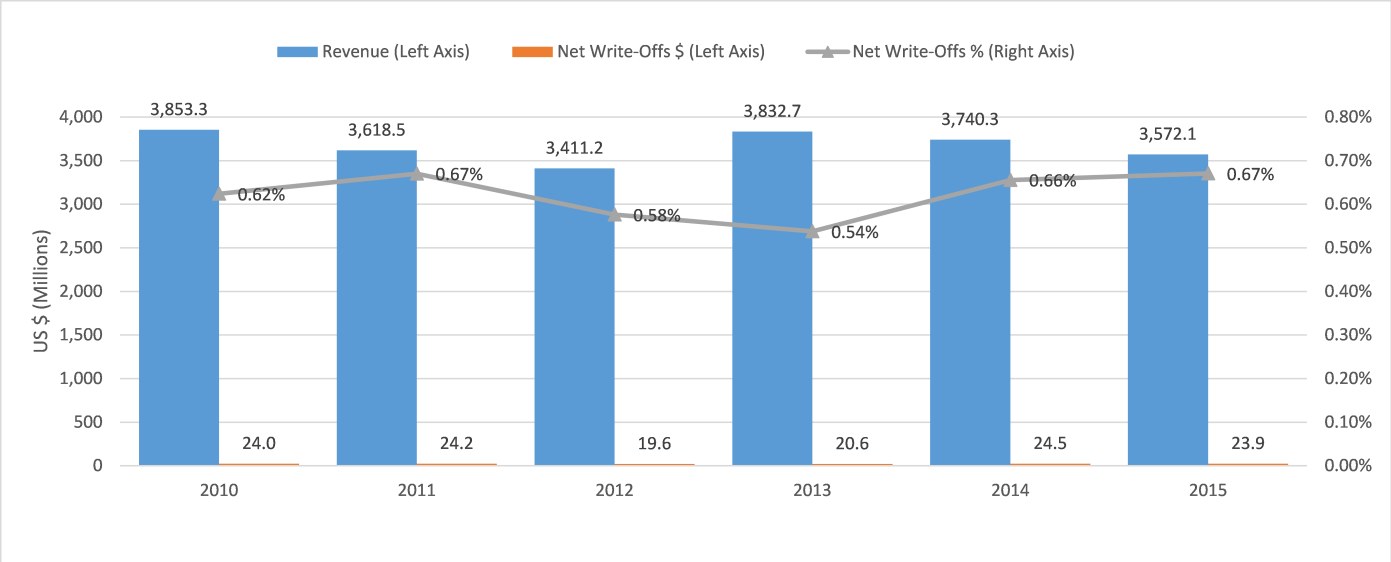
Under the securitization law and the financing order, if and to the extent that third parties are allowed to bill and/or collect any restructuring charges in the future while the bonds are outstanding, LIPA, any successor servicer, and any owner of the T&D system assets will take steps to ensure nonbypassability and minimize the likelihood of default by third-party billers. Further, LIPA and any successor servicer will not permit implementation of any third-party billing or collection that would result in a reduction or withdrawal of the current ratings on the bonds.

The provision of electric service to customers by LIPA is governed by the Home Energy Fair Practices Act (HEFPA). LIPA's credit and collections practices, including the ability to terminate (disconnect) service, are governed by HEFPA.

Exhibit 5 below shows net write-offs since 2010, which have ranged from a low of 54bps of billed revenue in 2013 to a peak of 67bps in 2011 and 2015.

Exhibit 5

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Exhibit 6 below shows LIPA customer delinquency data since 2010.

Exhibit 6

Average Monthly Delinquencies as a Percentage of Total Billed Revenues

	2010	2011	2012	2013	2014	2015
30-59 days	1.40%	1.46%	1.48%	1.54%	1.34%	1.20%
60-89 days	0.73%	0.80%	0.82%	0.84%	0.67%	0.59%
90+ days	2.43%	2.82%	3.42%	3.54%	2.31%	2.46%
Total	4.56%	5.08%	5.72%	5.93%	4.31%	4.25%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

Assets Analysis

Legal Analysis

Under the laws of New York and the United States, New York could not constitutionally take any legislative action, including the repeal or amendment of the securitization law, which would substantially limit, alter or impair the restructuring property or other rights vested in the bondholders pursuant to the financing order or substantially limit, alter, impair or reduce the value or amount of the restructuring property, unless (1) such action is a reasonable exercise of the State of New York's sovereign powers that appropriately furthers a legitimate public purpose; and (2) if such action constituted a permanent appropriation of the bondholders' substantial property interest in the restructuring property and deprived them of their reasonable expectations arising from their investments in the bonds, under the takings clauses of the federal and New York Constitutions, New York could not take such action without paying just compensation to the bondholders as determined by a court of competent jurisdiction.

New York does not have a referendum or initiative process by which the securitization law may be challenged. Therefore, the only way for the securitization law to be changed would be through a legislative action which would be subject to the state pledge.

Bondholders (or the trustee acting on their behalf) could challenge under the Contract Clause of the United States Constitution the constitutionality of any repeal or amendment of the securitization law or any other action or failure to take any action required by the state pledge that limits, alters or reduces the value of the restructuring property or the restructuring charges before the bonds are repaid in full, unless such action is necessary to further a significant and legitimate public purpose.

Under existing case law, assuming the takings clause applies under the federal and New York Constitutions, respectively, the State of New York would likely be required to pay just compensation to the bondholders if the State undertook a repeal or amendment of the securitization law or took any other action or failed to take any action required by the state pledge before the bonds are repaid in full that: 1) permanently appropriates the related restructuring property or denies all economically productive use of the related restructuring property; 2) destroys the restructuring property, other than in response to emergency conditions; or 3) substantially reduces, alters or impairs the value of the restructuring property so as to unduly interfere with the bondholders' reasonable expectations arising from their investments in the bonds.

The financing order provides that the restructuring property may be pledged to secure the payment of the bonds, financing costs, and other amounts owed. The securitization law provides that a valid and enforceable security interest in the restructuring propery will attach and be perfected at the time the pledge is made. The lien and security interest attach without any physical delivery of collateral or other act. The securitization law provides that the pledge is continuously perfected and has priority over any other lien created by the operation of law or otherwise that may be created subsequently.

Strong Service Area

Long Island's economy benefits from a highly skilled labor force, close proximity to New York City, more than 20 colleges and universities and core research institutions.

Long Island's median household income is substantially above that of New York State and the US. According to estimates from the US Census Bureau, the 2014 median household income for Nassau County and Suffolk County was $99,035 and $86,266, respectively, considerably higher than the $58,878 for New York State and the $54,562 for the US. According to the Authority, while the cost of electricity in the service area is higher than the national average, the cost of electricity as a percentage of income is below the national average.

Exhibit 7 below shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 7
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	51.5%	52.8%	52.2%	52.4%	53.2%	53.2%	54.1%	53.8%	54.2%	54.4%	53.4%	54.4%
Commercial	46.6%	45.1%	45.7%	45.4%	44.5%	44.5%	43.8%	43.9%	43.7%	44.6%	44.0%	43.5%
Street Lighting	0.7%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	1.1%	0.7%
Other Public Authorities	1.1%	1.4%	1.3%	1.4%	1.5%	1.5%	1.3%	1.5%	1.4%	0.3%	1.5%	1.5%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016, and Moody's Investors Service

For the twelve months ending on June 30, 2016, the ten largest retail electric customers represented approximately 5.7% of the Authority's retail kilowatt-hour sales resulting in 4.8% of revenues. As of the closing date, no customer or group of related commercial is exempt from paying the restructuring charges. Exhibit 8 below shows the energy usage and revenue from the top 10 commercial customers.

Exhibit 8
Top 10 LIPA Commercial Customers

	Industry	Energy Usage (GWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	State Public Transportation	303.8	1.52%	$45,428,220	1.32%
2	Telecommunications	145.7	0.73%	$22,870,878	0.67%
3	Nas/Suf County Govt Twnsps	132.6	0.67%	$20,800,037	0.61%
4	Water Districts	122.7	0.62%	$20,598,940	0.60%
5	Health Services-Hospitals	120.0	0.60%	$17,580,632	0.51%
6	Retail Food	102.6	0.51%	$16,725,102	0.49%
7	Real Estate/Developers	66.9	0.34%	$5,284,931	0.15%
8	Nassau Universities	51.0	0.26%	$7,354,337	0.21%
9	Manufacturing	43.7	0.22%	$4,489,759	0.13%
10	Retail Non-Food	36.4	0.18%	$3,726,650	0.11%
	Total	**1,125**	**5.65%**	**164,859,486**	**4.81%**

Source: Utility Debt Securitization Authority

Remote Risk of Severe Ratepayer Base Declines

The Series 2016B bonds are exposed to the risk of declines in the ratepayer base in the service area. However, declines in the ratepayer base dramatic enough to impact the rating of the bonds are unlikely given the size, projected population growth and economic stability of the service area's stable ratepayer base. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of restructuring charges on other non-self-generating ratepayers. Customers that self-generate will only be responsible for paying restructuring charges based upon their net-billed consumption. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The restructuring charge will be recoverable from all customers taking T&D service. As of July 29, 2013, the securitization law defines the service area to include two counties in Long Island, NY – Nassau County and Suffolk County (except for the Nassau County villages of Freeport and Rockville Centre and the Suffolk County village of Greenport, each of which has its own municipal electric system) – and a small portion in Queens, NY known as the Rockaways. Thus, the service area is fixed by the legislation. If the service area expands in the future, the new customers would be subject to the restructuring charge on a going-forward basis.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges. Moreover, municipalization would not affect restructuring charge collections since a successor and its customers will be subject to the restructuring charges, even if the T&D system assets are no longer owned by the Authority. Since 1998, no municipalizations have occurred in the service area.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact the Authority's operations, temporarily interrupting transmission, distribution and consumption of electricity, hence reducing the collections of restructuring charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the Authority's service area, which could cause the per-kWh restructuring charge to be greater than expected.

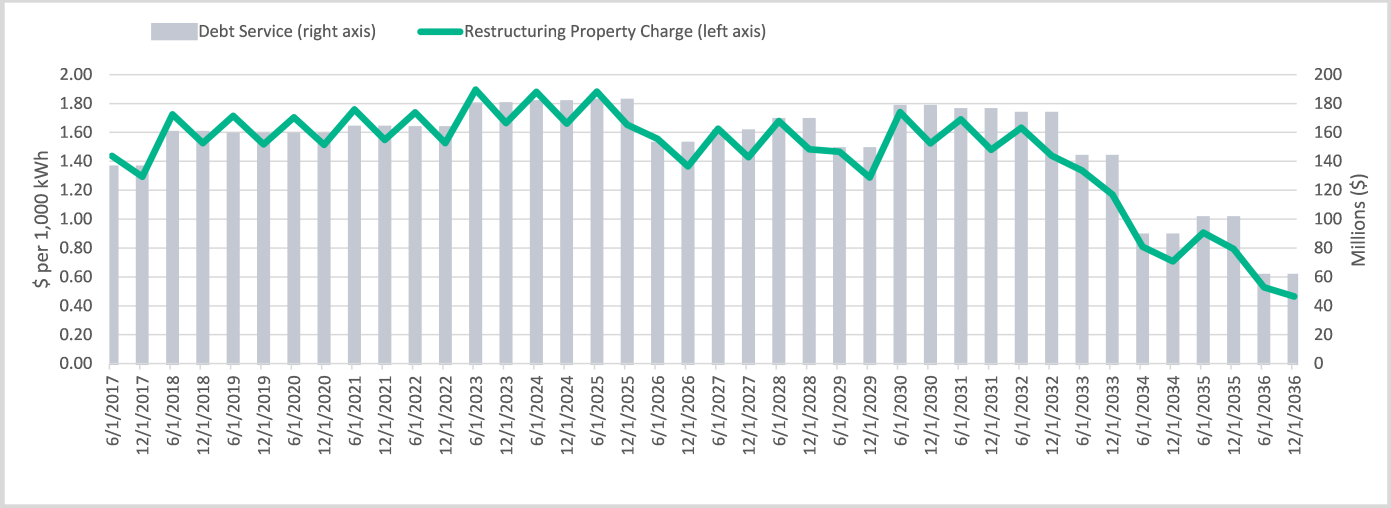
Forecasting Electricity Consumption

The Authority's internal company forecasts are used for projections of electricity price and weather conditions. The forecast incorporates customer usage, delinquencies and write-offs, among other inputs.

The Authority assesses the restructuring charges based on its forecasts of customer usage. The amount and the rate of restructuring charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs.

Exhibit 9 below shows the forecasted restructuring charge per 1,000 kWh and scheduled debt service payments.

Exhibit 9
Restructuring Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: Utility Debt Securitization Authority; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Additionally, there may be insufficient funds if the servicer inaccurately forecasts electricity consumption or uses inaccurate customer delinquency or charge-off data when setting or adjusting the 2016B restructuring charges. We view this risk as remote, as the maximum forecast variance since 2011 has been less than 6% per customer category, as shown in Exhibit 10.

Exhibit 10
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	4.31%	-2.37%	-2.69%	-4.28%	0.51%
Commercial	-1.00%	-3.59%	-2.39%	-1.70%	-2.07%
Street Lighting	0.17%	-2.19%	-4.44%	1.71%	-3.81%
Other Government	5.49%	-13.64%	-4.20%	3.13%	2.49%

Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

Cash Flow Analysis

We examined the cash flows that the restructuring charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the restructuring charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the restructuring charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm that the level of the restructuring charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the restructuring charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the restructuring charge, both in absolute terms and as a percentage of the customer's energy bill. In our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the restructuring charge is as high as 22.74%, higher than most other utility cost recovery charge securitizations. This concern is mitigated by the Authority's securitization offset rider, which reduces the delivery charge in an amount equal to any increase in the restructuring charge to keep customers' total monthly bills stable.

The Authority expects the combined initial restructuring charge for the 2013, 2015, 2016A and 2016B transactions to be around 7.8% of the total monthly bill that an average 1,000 kWh residential customer in the service area would receive as of June 15, 2017, which is higher than most other utility cost recovery charge securitizations we rate. The 7.8% is preliminary and subject to change based on market conditions.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the Authority's projections
2. Implied net charge-offs of 0.62%
3. Collection curve projects 20.0% of collections within 30 days and 80.0% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains LIPA or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case

4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year

5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case

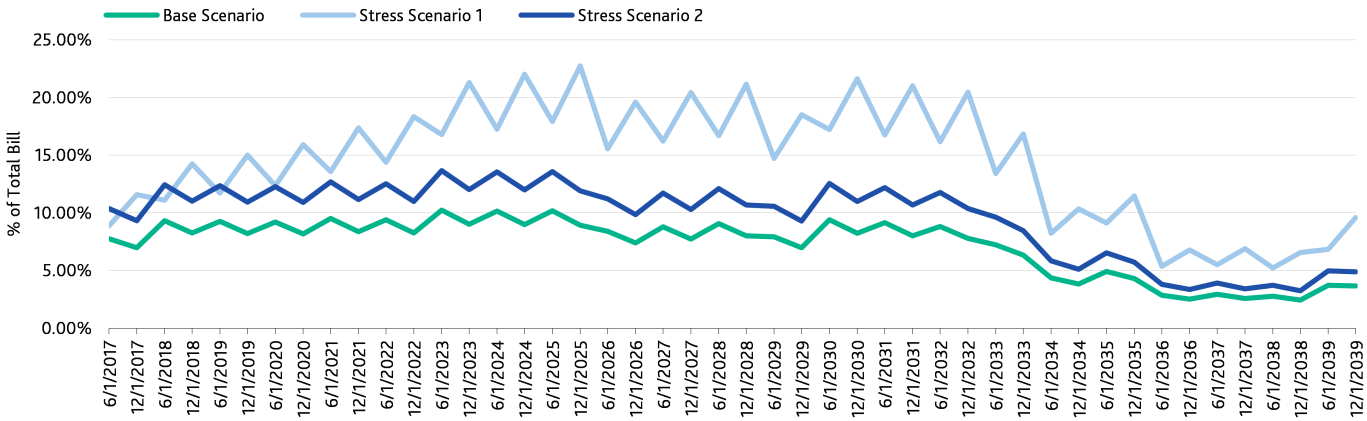
3. Collection curve is the same as in base case

4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 11 shows the projected restructuring charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 12 shows the projected restructuring charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 11

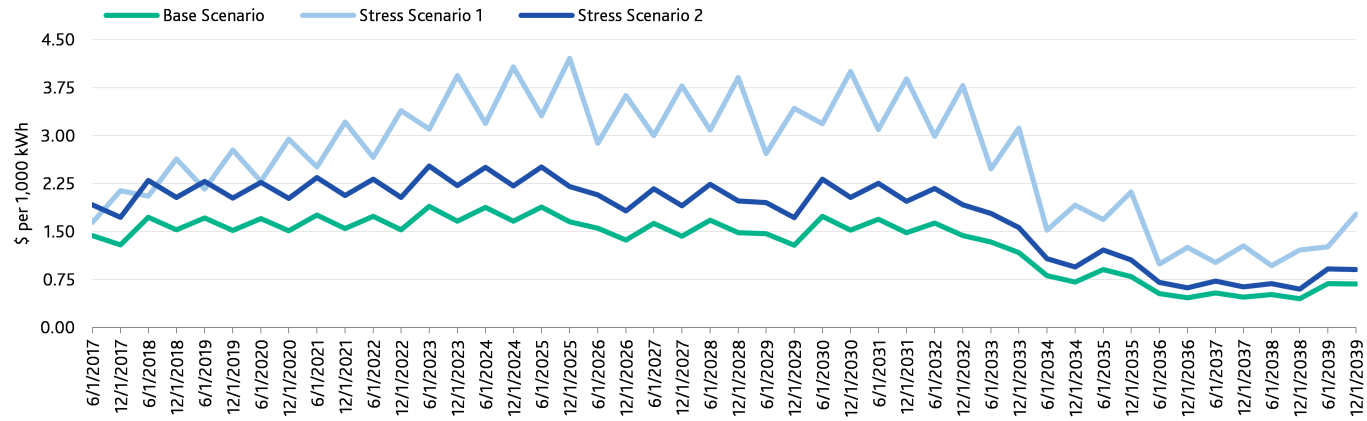
Projected Restructuring Charge as a Percentage of a Customer's Total Bill



Source: Utility Debt Securitization Authority; Moody's calculations

Exhibit 12

Projected Restructuring Charge ($ per 1,000 kWh)



Source: Utility Debt Securitization Authority; Moody's calculations

Comparables

As shown in Exhibit 13, stress scenario 1 is more stressful and results in a peak restructuring charge equal to about 22.74% of a 1,000 kWh per month customer's bill. This is high compared to other utility cost recovery deals.

Exhibit 13

Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
UDSA 2016B	10.25%	22.74%	13.66%
UDSA 2016A	7.21%	16.04%	10.40%
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

On the closing date, the Authority will sell the restructuring property to the issuer pursuant to a sale agreement between the issuer and the Authority. LIPA will be the servicer of the restructuring property. PSEG-LI will perform LIPA's key servicing duties pursuant to an operations services agreement, including billing and collecting restructuring charges, meter reading and forecasting electricity usage, among others.

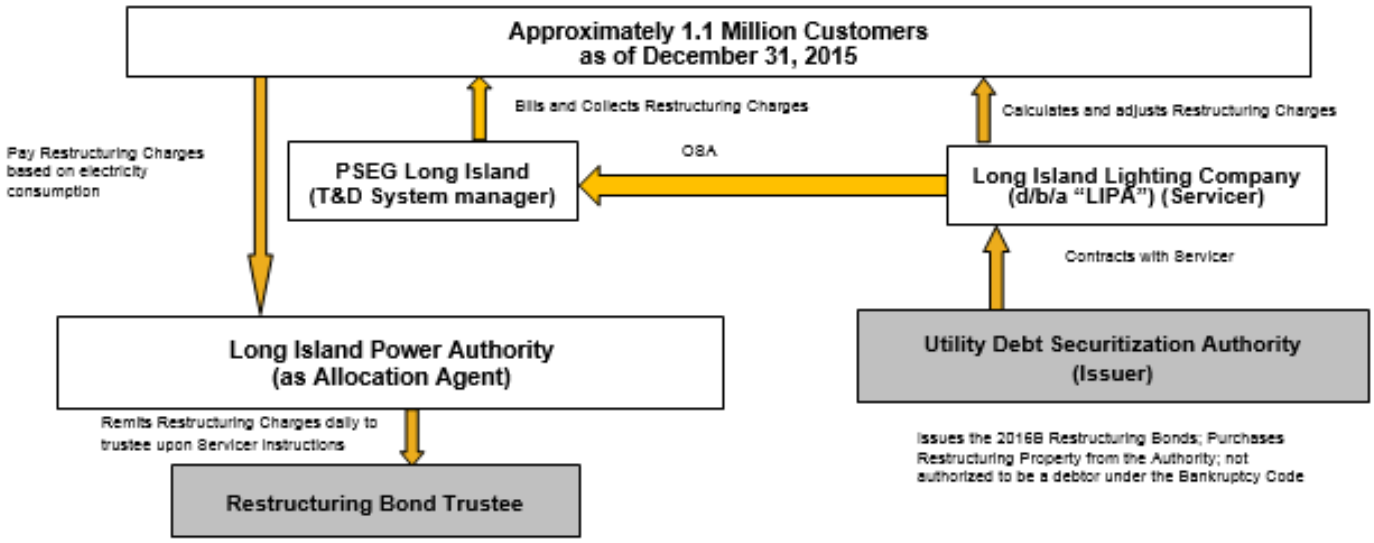
Securitization Structure Description

Structural Diagram

Exhibit 14 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 14

Structural Diagram



Source: Utility Debt Securitization Authority, Restructuring Bonds, Series 2016B Preliminary Official Statement dated July 28, 2016

1. The issuer purchases the restructuring property from the Authority and issues the Series 2016B bonds
2. The issuer contracts with LIPA as servicer to calculate and adjust the restructuring charges
3. LIPA contracts with PSEG-LI to bill and collect the restructuring charges

4. Electric utility customers pay restructuring charge on electricity bills based on electricity consumption
5. The Authority, as allocation agent, remits the restructuring charges to the trustee on a daily basis

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the debt service reserve account. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Operating Reserve Account

On or before the date of issuance of the bonds, the Authority will deliver to the trustee for deposit into the operating reserve account an amount not less than 0.50% of the initial aggregate principal amount of the Series 2016B bonds. Amounts may be withdrawn from the account to pay scheduled principal on the Series 2016B bonds, provided however that an amount not less than 0.50% remains on deposit in the account.

Debt Service Reserve Account

On or before the date of issuance of the bonds, the issuer will make a capital contribution to the trustee in an amount not less than 1.5% of the aggregate outstanding principal amount of the bonds, which will be deposited in the debt service reserve account. Under the financing order, any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the subaccount and applied to subsequent payments.

Cash Commingling

The servicer is entitled to commingle the restructuring charges that it receives with its own funds until it remits the funds to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from restructuring charges with other funds.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the allocation account within two business days. Any discrepancy between estimated and actual collections is mitigated by the true-up mechanism, which allows the Authority to adjust the restructuring charges at any time as needed to make timely interest and principal payments on the bonds.

Payment Priority

On each semiannual payment date, or for items 1 through 4 below, on any business day, the trustee will pay or allocate, at the direction of the servicer, all amounts on deposit in the collection account in the following order of priority:

1. to the trustee, i) all fees, expenses and ii) any outstanding indemnity amounts not to exceed $800,000 in each year;
2. to the servicer, the servicing fee and all prior unpaid servicing fees, capped at 0.60% of the aggregate principal balance of the bonds in each year;
3. to the administrator, the administration fee ($100,000 per year) and all prior unpaid administration fees;
4. the payment of all other operating expenses to the persons entitled to such payment;
5. to the bondholders, first, any overdue interest (together with, to the extent lawful, interest on such overdue interest at the applicable bond interest rate) and second, interest due on such payment date;
6. to the bondholders, principal due and payable on the bonds as a result of an event of default and an acceleration of the bonds or on the legal final maturity date of a tranche of bonds;

7. to the bondholders, principal for such payment date, sequentially according to the related expected amortization schedule;
8. to the trustee, indemnity amounts in excess of $800,000 in each year;
9. to the servicer, the servicing fee and all prior unpaid servicing fees in excess of 0.60% of the aggregate initial principal balance of the bonds in each year;
10. to the debt service reserve subaccount, the amount, if any, by which the required reserve level (1.5% of the aggregate outstanding principal balance of the bonds) exceeds the amount in the debt service reserve subaccount as of such payment date;
11. to the operating reserve subaccount, the amount, if any, by which the required operating reserve level (0.5% of the aggregate initial principal balance of the bonds) exceeds the amount in the operating reserve subaccount as of such payment date;
12. any funds in the debt service reserve subaccount in excess of the required debt service reserve level shall be retained in the debt service reserve subaccount and applied to clauses 5 through 7 above on the next payment date; and
13. to the excess funds subaccount, the balance, if any, for distribution on subsequent payment dates

If funds in the general subaccount are insufficient to make the payments required under items 1 through 9, the trustee will first, draw from amounts in the excess funds subaccount and second, draw from amounts in the operating reserve subaccount, in each case, to make the payments required under items 1 through 9. In addition, if funds in the general subaccount, together with moneys available in the excess funds subaccount and the operating reserve subaccount, are insufficient to make the payments required under items 5 through 7, the trustee will draw from amounts in the debt service reserve subaccount, up to the amount of such shortfall. If funds in the general subaccount are insufficient to make the allocations under item 10, the trustee will draw from amounts in the excess funds subaccount to make such allocations.

LIPA will calculate the annual true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next annual true-up adjustment. Should LIPA perform a mid-year true-up adjustment, LIPA will similarly calculate the mid-year true-up adjustment to eliminate any amounts in the excess funds subaccount by the payment date immediately preceding the effective date of the next mid-year true-up adjustment.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. failure to pay interest or redemption price on any bond when due (after a five day cure period);
2. failure to pay principal of any tranche of a bond on the legal final maturity date for such tranche;
3. failure of the issuer to perform a covenant (after a cure period);
4. breach by the issuer of its representations or warranties (after a cure period);
5. commencement of an involuntary bankruptcy or similar proceeding against the issuer which remains in effect for 90 days;
6. commencement of a voluntary bankruptcy or similar proceeding by the issuer; or
7. an action violating the financing order or state pledge.

Issuance of Additional Bonds

The issuer can issue up to $4.5 billion in restructuring bonds over four distinct financing orders. To the extent the amount authorized is not issued under this fourth and final financing order, additional financings may be authorized by new financing orders to be adopted at a later date. Each series of restructuring bonds that may be issued will be backed by separate restructuring property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of restructuring bonds. However, the issuer may not issue additional restructuring bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of restructuring property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the restructuring property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The securitization law created the issuer, a bankruptcy-remote special purpose corporate municipal instrumentality, and a political subdivision and public benefit corporation of the State of New York. Under the securitization law, the issuer is not authorized to be a debtor under Chapter 9 or any other provision of the Bankruptcy Code.

The issuer was formed solely to purchase and own the restructuring property, to issue the bonds which are to be secured by the restructuring property, and to perform any activity incidental thereto. The issuer has no commercial operations.

The issuer will issue the bonds under an indenture with the trustee and will use the bond proceeds to purchase the restructuring property from the Authority and to pay the cost of issuing the bonds. The issuer will pledge the restructuring property to secure the bonds.

Sponsor and Seller

The Long Island Power Authority will be the securitization's sponsor and the seller of the restructuring property. The Authority is a corporate municipal instrumentality and a political subdivision of the State of New York, and is authorized to be a Chapter 9 debtor pursuant to its enabling legislation.

The Authority took over as the retail supplier of electric service in the service area in 1998 by acquiring the Long Island Lighting Company (LILCO) as a wholly-owned subsidiary of the Authority through a merger. Since the merger, LILCO has done business under the name "LIPA." LIPA, acting through LILCO provides electric delivery service in the service area.

The Authority is governed by a Board of Trustees and is generally not regulated by the New York Public Service Commission (PSC) or the Federal Energy Regulatory Commission. The Authority is authorized under its enabling statute to set rates for electric service in the service area without obtaining the approval of the PSC or any other State regulatory body.

The Authority and LIPA are parties to a financing agreement providing for their respective duties and obligations relating to the financing and operation of the retail electric business. Under the agreement, LIPA conducts the electric business in the service area and is responsible for providing service to customers in the service area. The Authority and LIPA are also parties to an administrative services agreement pursuant to which the Authority provides personnel, personnel-related services and other services necessary for LIPA to provide electric service in the service area.

Administrator

LIPA will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. LIPA, as administrator, will be entitled to receive an annual administration fee of $100,000 payable annually, in arrears.

Securitization Structure Analysis

The key structural feature of this transaction is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage.

In this transaction, the strong true-up mechanism combined with nonbypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds. The operating reserve and debt service accounts provide sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of LIPA (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

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REPORT NUMBER 1033393

MOODY'S
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CREDIT OPINION
16 June 2016

Pre-Sale

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Estimated Closing Date

June 2016

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Duke Energy Florida Project Finance, LLC Series A Bonds

First Duke Energy Florida-Sponsored Utility Cost Recovery Bond

Capital Structure

Exhibit 1
Provisional (P) Ratings

Series	Provisional Rating	Expected Amount	Coupon	Legal Final Maturity Date
Series A 2018	(P)Aaa (sf)	$183,000,000	Fixed	3/1/2022
Series A 2021	(P)Aaa (sf)	$150,000,000	Fixed	9/1/2024
Series A 2026	(P)Aaa (sf)	$436,000,000	Fixed	9/1/2031
Series A 2032	(P)Aaa (sf)	$250,000,000	Fixed	3/1/2035
Series A 2035	(P)Aaa (sf)	$275,290,000	Fixed	9/1/2038
Total		$1,294,290,000		

The ratings address the expected loss posed to investors by the legal final maturity. In Moody's opinion the structure allows for timely payment of interest and ultimate payment of principal at par on or before the rated final legal maturity date. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks are not addressed, but may have a significant effect on yield to investors.
Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Summary Rating Rationale

We have assigned provisional ratings to the five classes of bonds (Series A bonds, or the bonds) that Duke Energy Florida Project Finance, LLC (the issuer) will issue. The issuer is wholly-owned by Duke Energy Florida, LLC (DEF; A3 Stable), a subsidiary of Duke Energy Corporation (Baa1 negative), one of the largest utility holding companies in the US. DEF formed the issuer to securitize a special charge on DEF customers' utility bills. The charge is imposed to recover certain costs associated with DEF's retirement of its Crystal River Unit 3 (CR3) nuclear power plant, including certain capitalized costs of the retired nuclear generating asset and ancillary costs and fees, as well as financing costs associated with this issuance. The Series A bonds will be the first utility cost recovery bonds sponsored by DEF.

This pre-sale report addresses the structure and characteristics of the proposed transaction based on the information provided to Moody's as of 15 June 2016. Investors should be aware that certain issues concerning this transaction have yet to be finalized. Upon conclusive review of all documents and legal information as well as any subsequent changes in information, Moody's will endeavor to assign definitive ratings to this transaction. The definitive ratings may differ from the provisional ratings set forth in this report. Moody's will disseminate the assignment of definitive ratings through its Client Service Desk. This report does not constitute an offer to sell or a solicitation of an offer to buy any securities, and it may not be used or circulated in connection with any such offer or solicitation.

As a regulated utility, DEF is typically entitled to recover specified costs of acquiring, constructing and improving energy generating assets which are generally capitalized and recovered over the useful life of that asset. The Florida Public Service Commission (FPSC) has authorized DEF to recover a specified portion of DEF's remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the CR3 nuclear plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges (nuclear asset-recovery property) is the primary collateral backing the Series A bonds.

Our provisional ratings reflect our assessment of the legal and structural aspects of the transaction including the State of Florida's legislation, financing order and state pledge, the mandatory uncapped true-up mechanism, the relatively low level of the recovery charge as compared to prior rated utility cost recovery transactions, the large and diversified ratepayer base, and the credit quality of the servicer.

Credit Strengths

Strength of Legislation and Financing Order: The State of Florida's legislation (Section 366.95, Florida Statutes, or the securitization law), coupled with an irrevocable financing order that became final and non-appealable on December 19, 2015 permits the securitization and strongly protects the nuclear asset-recovery property securing the bonds. Similar to other utility cost recovery securitizations, this transaction benefits from the securitization law's inclusion of a state non-impairment pledge under which the State of Florida pledges to bondholders that it will not (1) alter provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of the nuclear asset-recovery property, or (3) except as authorized by the true-up adjustment mechanism, reduce, alter or impair nuclear asset-recovery charges until the bonds have been repaid in full (the state pledge). In addition, the securitization law and financing order contain the typical strong true-sale and security interest provisions.

FPSC's irrevocable financing order authorizes DEF to recover specified costs of retiring the CR3 nuclear plant by collecting nuclear asset-recovery charges. This nuclear asset-recovery property grants the issuer the right to impose, bill and collect, nonbypassable nuclear asset-recovery charges based on electricity usage, and related rights, including a mandatory uncapped true-up mechanism that periodically adjusts the charges to ensure timely bond payments until the bonds are repaid in full. In this context, nonbypassable refers to the requirement that the charges be levied on all of DEF's existing and future retail electric customers receiving transmission and distribution services in DEF's service area, including customers of any DEF successor or assignee, and even if a customer elects to purchase electricity from an alternative electric supplier following a deregulation of public utilities in Florida.

True-Up Adjustment Mechanism: The true-up adjustment mechanism is the key form of credit enhancement supporting the bonds. The financing order authorizes an uncapped true-up adjustment mechanism that mandatorily adjusts nuclear-asset recovery charges semiannually (and quarterly after the last scheduled maturity date of the bonds of any series) to ensure timely bond payments. In addition, the financing order authorizes more frequent interim adjustments, at any time if the servicer deems necessary to ensure timely bond payments.

Relatively Low Recovery Charge: DEF expects the securitization's initial nuclear asset-recovery charge to represent around 2.5% of the total monthly bill that a 1,000 kilowatt hour (kWh) residential customer in DEF's service area will receive as of April 2016; this percentage charge is relatively low compared to charges in other utility cost recovery transactions. For context, the three most recent utility cost recovery bond issuances we rated, Utility Debt Securitization Authority, sponsored by LIPA, Entergy New Orleans Storm Recovery Funding I, LLC, and the Louisiana Utilities Restoration Corporation Project/ ELL, had a cumulative (including prior utility cost recovery charges to the same customer base) initial recovery charge amounting to 6.9%, 2.5%, and 3.7% of a 1,000 kWh residential bill, respectively.

Strength of the Ratepayer Base: The size, economic stability and diversity of the ratepayer base in DEF's service area is a credit strength. The service area includes the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas. The service area primarily

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

includes a mix of residential customers (59% by revenue) and commercial customers (28% by revenue). Unlike most other utility cost recovery securitizations, the service area includes very few industrial customers (6% by revenue), which is a credit positive. Energy consumption by industrial customers is more volatile compared with other types of customers, because consumption by industrial operations is more closely tied to the business cycle.

Strength and Experience of the Servicer: We rate DEF A3 with a stable outlook. DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

Credit Challenges

Challenges to Securitization Law and Financing Order: Potential state and federal legislative and regulatory actions could weaken the legal protections of the nuclear asset-recovery property; however we view this risk as remote. Florida does not have a referendum or initiative process by which voters could challenge the securitization law. Therefore, the only way to repeal or amend the securitization law, or for FPSC to amend or revoke the financing order, would be through an amendment to the state constitution or a legislative action, either of which would violate the state pledge. The risk that the State of Florida would take legislative action that compromises its state pledge to the significant detriment of bondholders is remote because state impairment would give rise to claims under state and federal laws prohibiting government impairment of contracts and taking of private property without reasonable reimbursement under state and federal "taking" claims. The irrevocable and unconditional nature of the financing order mitigates any concern that it could be altered.

The people of the State of Florida have the right to amend the Florida Constitution through initiative powers. It is possible that the people of Florida, using their initiative powers, might amend or repeal the Florida Constitution in a manner affecting the securitization law. The process to propose a revision or amendment to the Florida Constitution by initiative is extremely burdensome. DEF is currently unaware of any efforts to amend the Florida Constitution in a manner which would affect the securitization law in any way.

On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (Section 366.93, Florida Statutes) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

We view the risk to bondholders from this litigation as remote. Several past challenges to securitization laws such as this have been unsuccessful, and even in the low likelihood event that this challenge is successful, the arguments put forward by the plaintiffs are generally not relevant to the securitization law.

Potential for Insufficient Collections: Collections arising from the nuclear asset-recovery property could fall short of required distributions on the bonds resulting from inaccurate forecasting of electrical consumption by the servicer, unanticipated delinquencies and defaults, population migration, self-generation and storm damage. DEF's estimates of market demand, energy prices and growth within its service area could also be inaccurate. These concerns are mitigated by the mandatory uncapped true-up adjustment mechanism, in which the servicer is required to adjust the charges periodically throughout the year to ensure timely payment of the bonds. These true-up adjustments occur semiannually and on an interim basis as needed.

Key Characteristics

Asset Characteristics (as of 15 June 2016)

Exhibit 2

Asset Characteristics

Assets:	Nuclear asset-recovery property, which consists of all rights and interest of the issuer under the financing order, including the right to impose, bill, collect and receive irrevocable, binding, nonbypassable charges based on the usage of electricity from all existing or future customers receiving transmission or distribution service from DEF or its successors or assignees
Service Area:	DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Securitization Structure Characteristics

Exhibit 3

Securitization Structure Characteristics

Securities Offered:	Series A Senior Secured Bonds
Amount:	$1,294,290,000
Structure:	Standalone trust
Credit Enhancement:	Mandatory uncapped true-up mechanism, Capital Subaccount
Transaction Parties	
Sponsor/Depositor/Servicer:	Duke Energy Florida, LLC
Issuer:	Duke Energy Florida Project Finance, LLC
FPSC Financial Advisor:	Saber Partners, LLC
Trustee:	The Bank of New York Mellon Trust Company, National Association

Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Assets Overview

In February 2013, DEF announced it would close and decommission the CR3 nuclear power plant. The FPSC has authorized DEF to recover a portion of its remaining unrecovered capitalized and newly incurred costs associated with the early retirement of the plant (nuclear asset-recovery costs). The nuclear asset-recovery costs, together with interest and other financing costs, are recovered by irrevocable, binding, nonbypassable charges (nuclear asset-recovery charges) imposed on all DEF transmission and distribution customers for the total value of the nuclear asset-recovery costs. The right to impose, bill, collect and receive the nuclear asset-recovery charges is the primary collateral (nuclear asset-recovery property) backing the Series A bonds.

The bonds are also secured by funds on deposit in the collection account, including the general subaccount, the capital subaccount and the excess funds subaccount, by the issuer's rights under the various transaction documents, by the issuer's right to compel the servicer to file for and obtain true-up adjustments, and by all payments on or under the pledged collateral and by all proceeds in respect to the pledged collateral.

Assets Description

The Securitization Law

In 2015, the Florida legislature enacted the securitization law, codified as Section 366.95, Florida Statutes. The securitization law allows electric utilities to access lower-cost funds through nuclear asset-recovery bonds pursuant to financing orders issued by the FPSC. One purpose of the securitization law is to lower the cost to customers associated with the long-term financing of costs incurred in connection with the early retirement or abandonment of a nuclear generating asset unit. The early retirement or abandonment must be deemed reasonable and prudent by the FPSC through a final order approving a settlement or other final order issued by the FPSC before July 1, 2017, and the pretax costs to be financed must exceed $750 million.

The securitization law permits DEF to impose irrevocable, binding, nonbypassable nuclear asset-recovery charges on all future and existing customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts sufficient to pay principal of and interest on the bonds and other administrative expenses of the offering. The FPSC governs the amount and terms for collections of these nuclear asset-recovery charges through one or more financing orders issued to DEF. Upon the issuance of the bonds these nuclear asset-recovery charges may not be reduced, impaired, postponed, terminated or otherwise adjusted by the FPSC except as adjusted pursuant to the true-up mechanism.

Florida and other states have passed legislation similar to the securitization law 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.

The securitization law provides that a valid and enforceable security interest in nuclear asset-recovery property will attach only upon the later of: the issuance of a financing order, the execution and delivery of a security agreement with the indenture trustee in connection with issuance of a series of bonds, and the receipt of value for such bonds. Although not governed by the UCC, upon filing notice with the Florida UCC registry the lien and security interest will be continuously perfected. The security interest will have priority in the order of filing and take precedence over any subsequent judicial or other lien creditor. No continuation statements are necessary to maintain such perfection. The servicer pledges in the servicing agreement to file in the Florida UCC registry on or before the closing date and the seller will represent that no prior filing has been made.

The Financing Order

The FPSC issued an irrevocable financing order to DEF on November 19, 2015. That financing order became final and non-appealable on December 19, 2015. Pursuant to the financing order, DEF established the issuer to be a bankruptcy-remote special purpose subsidiary to issue the nuclear asset-recovery bonds. In the financing order, the FPSC authorized the imposition and collection of nuclear asset-recovery charges on all DEF transmission and distribution customers. DEF, as initial servicer, will collect nuclear asset-recovery charges on the issuer's behalf and will remit the nuclear asset-recovery charges to the indenture trustee.

The FPSC expects the financing order to result in a substantial cost savings to ratepayers of $708 million or $1.95 per month for 1,000 kWh, versus the traditional method of cost recovery under current and expected market conditions. The financing order has been praised publicly by regulators and consumer advocacy groups, further insulating the financing order from challenge.

The State Pledge

The securitization law includes a pledge from the State of Florida to the bondholders that it will not (1) alter the provisions of the securitization law which make the nuclear asset-recovery charges irrevocable, binding, and nonbypassable; (2) take or permit any action that impairs the value of nuclear asset-recovery property; or (3) except as authorized by the true-up adjustment mechanism, reduce, alter, or impair the nuclear asset-recovery charges until the bonds have been repaid in full.

Any action of the Florida legislature adversely affecting the nuclear asset-recovery charges or the ability to charge or collect the charges would likely require the State of Florida to pay just compensation under the "takings clause" of the US and Florida Constitutions. The seller agrees that it will institute any action or proceeding necessary to compel performance by the FPSC, the State of Florida or any of their respective agents of any of their obligations or duties under the securitization law or any financing order.

The Nuclear Asset-Recovery Charges

The nuclear asset-recovery charges are nonbypassable, consumption-based charges separate and apart from DEF's base rates; the nuclear asset-recovery charges are to be paid by all existing and future customers receiving transmission or distribution service from DEF or its successors or assignees under FPSC-approved rate schedules or under special contracts. Such customers must pay nuclear asset-recovery charges even if DEF goes out of business and its transmission and distribution services are taken over by another utility or if a customer elects to purchase electricity from an alternative electric supplier following a fundamental change in regulation of public utilities in Florida. No customer receiving transmission or distribution service from DEF can avoid the charge. The only way to avoid the charge is to disconnect from DEF's electric grid.

The nuclear asset-recovery charges are permitted to continue for 276 months from issuance, or until the bonds are paid in full. The expected scheduled final payment date for the Series A 2033 bonds is 240 months from issuance, providing up to an additional 36 months of nuclear asset-recovery charges if necessary to pay the bonds.

The Nuclear Asset-Recovery Costs

The nuclear asset-recovery charges authorized by the financing order allow DEF to recover nuclear asset-recovery costs related to retiring the CR3 nuclear plant located in Citrus County, Florida. CR3 was originally placed in service in 1977. In February 2013, DEF announced the early retirement of the project. DEF's unrecovered net investment in the project was approximately $1.6 billion. In October 2013, the FPSC approved a settlement agreement whereby DEF agreed to write-off approximately $300 million of its unrecovered net investment in CR3. The settlement agreement allowed DEF to recover its remaining unrecovered net investment in the project of approximately $1.3 billion over a 240 month period beginning no later than the first billing period of January 2017.

The nuclear asset-recovery costs financed by the bonds are equal to (i) the balance of the CR3 regulatory asset as of December 31, 2015 as allowed under the financing order minus (ii) $35,894,547, which, pursuant to the FPSC's Final Order PSC-16-0138-FOF-EI issued on April 5, 2016, shall not be included as part of the CR3 regulatory asset, plus (iii) carrying charges accruing at 6.0% per annum on the balance of the CR3 regulatory asset (adjusted as described in (ii) above) from December 31, 2015 through June 21, 2016.

Excluded from the amount being financed is $35,894,547 of costs claimed pursuant to Section 366.93, Florida Statutes. On February 26, 2016, DEF was served with a class action lawsuit in which the plaintiffs allege that the nuclear cost recovery statute (366.93) is unconstitutional on various grounds. The putative plaintiffs seek a refund of costs paid by DEF customers pursuant to the nuclear cost recovery statute. The securitization law is not the subject of this litigation.

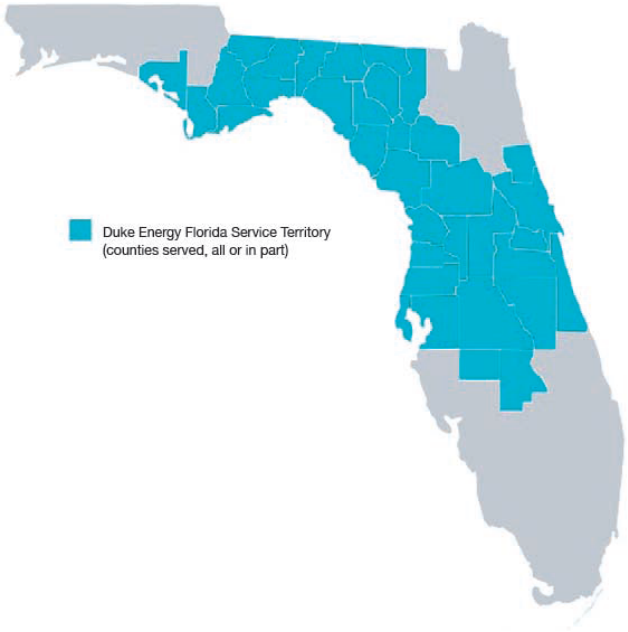
The suit claims DEF unlawfully charged customer higher rates to cover more than $1.2 billion in expenses at its Crystal River nuclear power plant and at its proposed (and now shelved) Levy County nuclear plant site. In addition to the suit seeking relief for nuclear recovery costs, it also seeks to nullify as unconstitutional the nuclear cost recovery system and all nuclear cost recovery orders issued by the FPSC, and it seeks an order enjoining defendants from further unlawful charges. The likelihood of the lawsuit prevailing is low considering other lawsuits challenging the constitutionality of Florida's nuclear cost recovery statute have been found to be without merit and rejected by Florida courts.

The Service Area

DEF's service area covers approximately 13,000 square miles, including the greater Gainesville, Orlando, St. Petersburg, and Tallahassee areas, and supplies electric service to approximately 1.7 million residential, commercial and industrial customers. During the twelve

months ended December 31, 2015, DEF billed approximately 38.6 billion kilowatt hours of electricity to its covered electric customers in Florida, resulting in revenues of approximately $4.4 billion. Exhibit 4 below shows a map of DEF's service area.

Exhibit 4
Duke Energy Florida Service Area



Source: Duke Energy Florida Project Finance, LLC Series A Preliminary Prospectus dated June 15, 2016

Statutory Uncapped True-Up Adjustment Mechanism

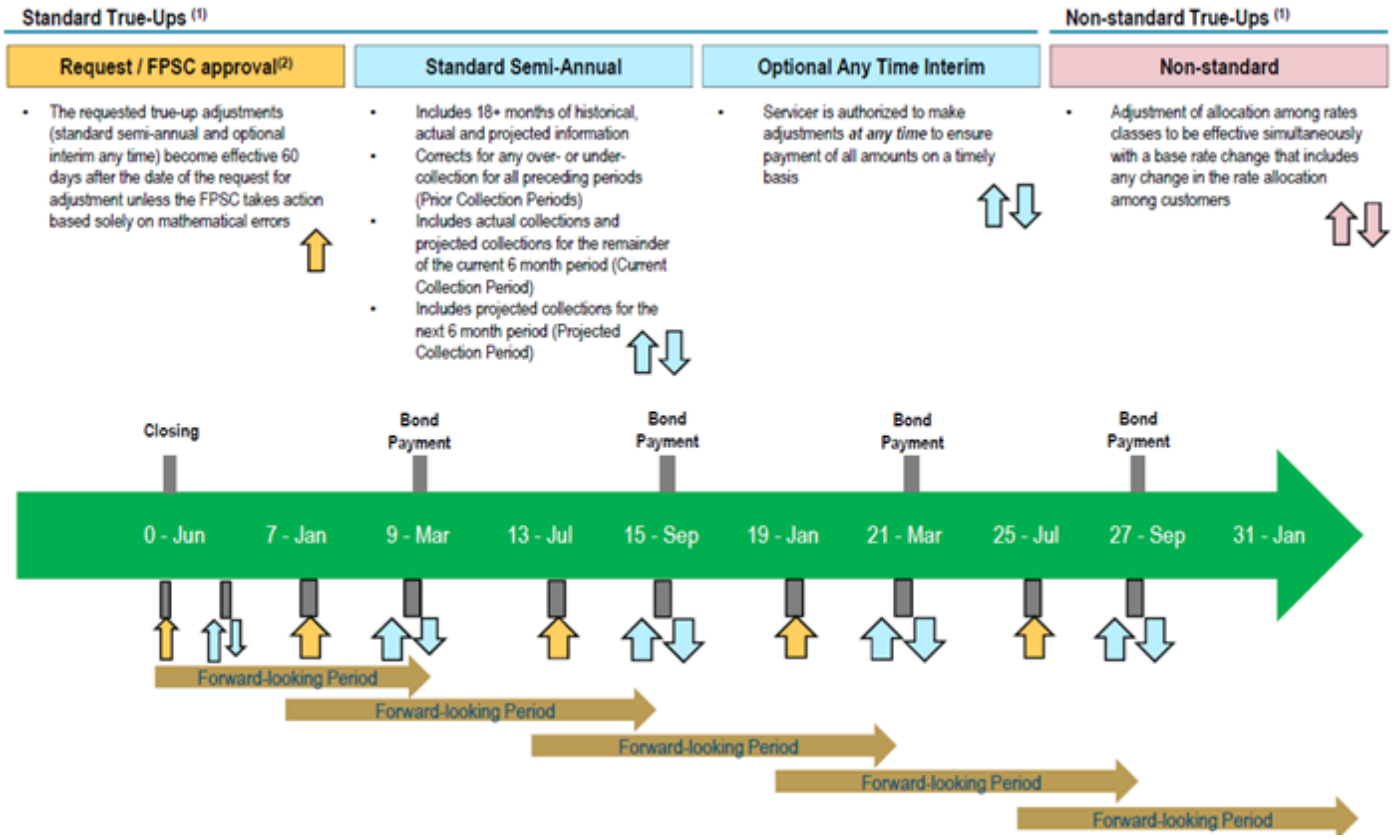
The securitization law and the financing order require that the issuer or DEF file with the FPSC at least semi-annually (and quarterly after the scheduled final payment date for the latest maturing bond) a letter applying the true-up mechanism to correct for any overcollection or undercollection of the nuclear asset-recovery charges and make any adjustments to ensure the recovery of revenues sufficient to provide for the timely payment of scheduled principal and interest on the bonds and other required amounts and charges. The FPSC's review of any adjustment request is limited solely to determining whether there is any mathematical error in the application of the formula-based mechanism.

Under the servicing agreement, the servicer will make adjustments to the nuclear asset-recovery charges at least semi-annually. In addition to the semi-annual true-up adjustment, the servicer is authorized to make interim adjustments at any time for any reason to ensure the timely payment on the bonds. In addition, the servicer will make a non-standard true-up adjustment to be effective simultaneously with a base rate change that includes any change in the rate allocation among customers used to determine the nuclear asset-recovery charges. Exhibit 5 below illustrates the true-up mechanism.

Under the irrevocable financing order, the FPSC guarantees it will act, as directed by the securitization law, to implement the true-up mechanism for making any adjustments that are necessary to correct for any overcollection or undercollection of the nuclear asset-recovery charges or to otherwise ensure the timely payment of principal of and interest on the bonds when due.

Exhibit 5

True-Up Mechanism



Source: DEF

Servicing

DEF will be the initial servicer of the bonds. DEF, as servicer, will be responsible for, among other things, calculating, billing, collecting and posting the nuclear asset-recovery charges from customers, submitting requests to the FPSC to adjust these charges, monitoring the collateral for the bonds and taking certain actions in the event of non-payment by a customer. The indenture trustee's receipt of collections in respect of the nuclear asset-recovery charges, which will be used to make payments on bonds, will depend in part on the skill and diligence of the servicer in performing these functions.

DEF does not have prior servicing experience with nuclear asset-recovery charges, but is highly experienced in calculating and implementing similar rates and charges under various cost recovery statutes and billing those amounts to customers. DEF has over one hundred years of experience in collecting similar charges from its customers.

DEF will be entitled to receive an annual servicing fee in an amount equal to 0.05% of the aggregate initial principal amount of the bonds. This servicing fee will be payable in equal installments on each semi-annual payment date, in arrears. If DEF or any of its affiliates is not the servicer, the successor servicing fee may be up to 0.60% of the initial principal amount of the bonds unless a higher fee is approved by the FPSC.

In the event of a servicer default, the indenture trustee, at the direction of a majority of bondholders or at the direction of the FPSC, may terminate the rights and obligations of the servicer under the servicing agreement. However, replacement of the servicer would require the agreement of the indenture trustee and the administrative agents under DEF's accounts receivable sale programs.

Credit, Billing and Budget Billing

DEF is required to provide transmission and distribution service to all qualified customers. First time customers establishing residential electric accounts are generally required to pay a deposit as are customers that do not satisfy threshold credit score requirements.

The amount of the deposit reflects the estimated use over a two-month period, which is the maximum DEF may collect by law. As a general rule, non-residential accounts require deposit coverage. Consumer credit is not used to determine credit worthiness on non-residential accounts.

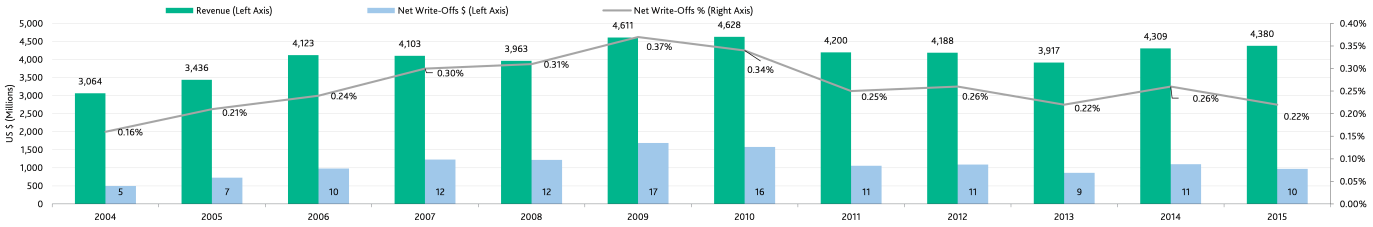
DEF bills its customers once every 24 to 39 days and distributes approximately 85,000 bills on each business day to its customers. Approximately 6% of DEF's residential customers choose to be billed using DEF's budget billing program. For these customers, DEF determines and bills a monthly budget based on the last twelve months of billing history for each account. Budget billing does not affect the amount of nuclear asset-recovery charges that the servicer remits to the indenture trustee on a daily basis.

Bills are due 21 calendar days after the issue date at which time they are considered delinquent. For the year ended December 31, 2015, approximately 6% of total billed retail revenue became eligible for disconnect and 1% was disconnected. Approximately 87% of accounts disconnected for nonpayment ultimately make full payment and have service restored. Unpaid final bills are written off approximately 30 days after the final bill is issued.

Exhibit 6 below shows net write-offs since 2004, which have ranged from a low of 16bps of billed revenue in 2004 to a crisis period peak of 37bps in 2009. DEF's forecast is 26 bps, consistent with the post-crisis performance history.

Exhibit 6

Net Write-Offs as a Percentage of Billed Retail Revenues



Source: DEF

While more than 7.5% of customers are typically 30-59 days past due, by the third month most delinquencies are cured, with those still outstanding past 90 days well under 1% throughout the observation period. Exhibit 7 shows DEF customer delinquency data since 2005.

Exhibit 7

Delinquencies as a Percentage of Total Billed Revenues

	As of 2005	As of 2006	As of 2007	As of 2008	As of 2009	As of 2010	As of 2011	As of 2012	As of 2013	As of 2014	As of 2015
30-59 days	8.27%	8.51%	9.66%	8.41%	9.38%	7.82%	7.79%	7.59%	7.48%	7.79%	7.73%
60-89 days	0.92%	0.87%	1.12%	1.07%	0.78%	0.59%	0.57%	0.54%	0.59%	0.64%	0.57%
90+ days	0.52%	0.56%	0.90%	0.66%	0.51%	0.33%	0.22%	0.21%	0.28%	0.33%	0.33%
Total	9.71%	9.94%	11.68%	10.14%	10.67%	8.75%	8.58%	8.34%	8.35%	8.76%	8.63%

Source: DEF

Assets Analysis

Strong Service Area

This transaction benefits from the size and diversity of the ratepayer base within DEF's service area and the projected population growth and economic stability of the ratepayer base. During 2015, approximately 9% of DEF's total retail billed electric consumption was by industrial customers, approximately 31% was by commercial customers and approximately 52% was by residential customers, with other entities comprising approximately 8%. Exhibit 8 shows the percentage of total billed revenue attributable to each customer class since 2004.

Exhibit 8
Sales by Revenue Class (% of Total Billed Revenue)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Residential	57.91%	57.70%	56.85%	57.21%	56.94%	57.34%	59.72%	58.18%	56.96%	58.49%	58.85%	59.43%
Commercial	27.66%	27.57%	27.89%	28.06%	28.39%	28.46%	27.01%	28.10%	28.85%	28.11%	27.81%	27.51%
Industrial	7.65%	7.73%	7.98%	7.34%	7.31%	6.70%	6.14%	6.40%	6.53%	6.12%	6.10%	5.91%
Streetlighting	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.04%	0.04%	0.05%	0.04%	0.04%	0.04%
Public Authority	6.73%	6.95%	7.22%	7.34%	7.31%	7.44%	7.09%	7.28%	7.61%	7.24%	7.20%	7.11%

Source: DEF

For the year ended December 31, 2015, the ten largest retail electric customers represented approximately 8.3% of DEF's retail kilowatt-hour sales. There are no material concentrations in the residential class. As of the closing date, no customer or group of related commercial or industrial customers will be obligated to pay more than 10% of the nuclear asset-recovery charges.

Exhibit 9
Top 10 DEF Customers

	Industry	Energy Usage (MWh)	% of Total Energy Usage	Revenues ($000)	% of Total Revenues
1	Mining/Chemical Processing	691,591	1.79%	$46,289	1.06%
2	Education	456,852	1.18%	$37,972	0.87%
3	Retail Grocery	393,738	1.02%	$35,619	0.81%
4	Mining/Chemical Processing	340,470	0.88%	$23,343	0.53%
5	Education	252,072	0.65%	$27,720	0.63%
6	Retail Trade	250,016	0.65%	$24,409	0.56%
7	Stone/Clay/Glass	236,193	0.61%	$15,771	0.36%
8	Education	201,586	0.52%	$23,188	0.53%
9	Retail Grocery	199,997	0.52%	$19,744	0.45%
10	Government	175,246	0.45%	$16,124	0.37%
	Total	3,197,761	8.29%	$270,179	6.17%

Source: DEF

Remote Risk of Severe Ratepayer Base Declines

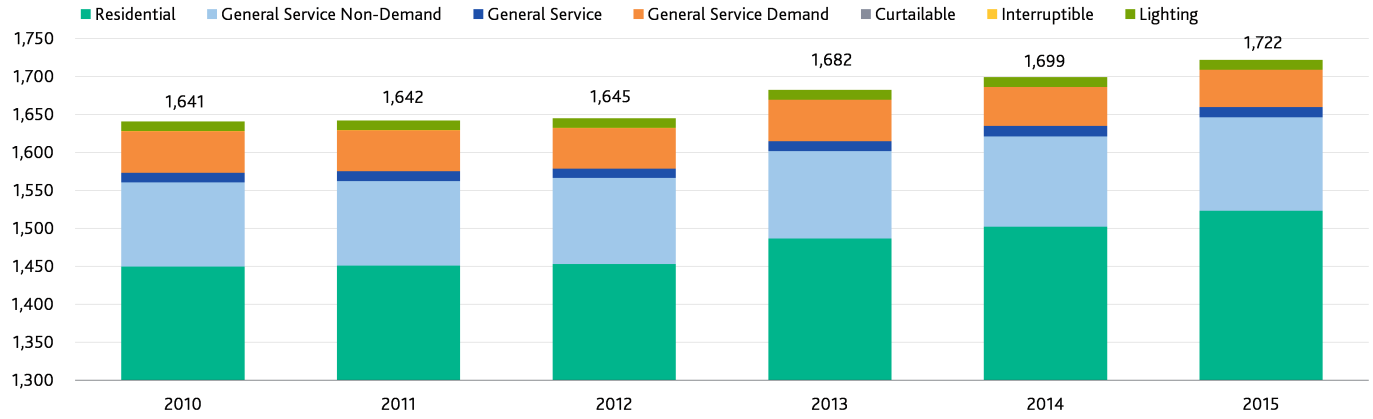
The ratepayer base is sensitive to many macroeconomic factors, including service area population and household formation growth, expected disconnects due to use of self-generation, changes in the service area and potential municipalizations. We view the risks to the transaction of ratepayer base declines due to any of these factors to be low.

Population Growth

Florida's robust population trend is a benefit to the transaction. According to the Census Bureau, the state's population grew an average of 1,000 residents per day in 2015. This 1.8% increase was the largest since 2006 and the strongest in the South. Despite the rapid rise, population growth will likely accelerate further because the pace remains historically weak. In the 50 years before the Great Recession, annual population growth in the state exceeded last year's pace by 47 times. Florida should also expect faster expansion because its cities appeal to Hispanics—the nation's fastest growing ethnic group—and retiring baby boomers— the fastest-growing age

group in the U.S. In 2015, for the third consecutive year, The Villages, Central Florida's retiree haven, was the nation's fastest growing metro area in population. Exhibit 10 shows that growth in the average number of DEF retail electric customers since 2010.

Exhibit 10
Average Number of Retail Electric Customers



Source: DEF

Self-Generation

We look at the potential for increased use of self-generation as a minor headwind to the transaction. Self-generation, which primarily includes solar, reduces the ratepayer base and increases the burden of nuclear asset-recovery charges on other non-self-generating ratepayers. Based on existing legislation precluding the use of third-party owned solar equipment, DEF expects the estimated cost of self-generation for customers, combined with the practical obstacles to installing on-site generation, to limit self-generation from being installed by any meaningful number of customers within the service area. DEF forecasts self-generation to grow slowly over the next three years, and incorporates self-generation into its electricity consumption forecasts. The securitization law and financing order do not provide for exit fees to be charged to any customers that might leave the grid to self-generate.

Change in Service Area

We look at the risk of a ratepayer base decline due to a change in the service are to be minimal. The nuclear asset-recovery charge will be recoverable from all DEF customers taking transmission or distribution service from DEF. Thus, if the service area expands in the future, the new DEF customers would be subject to the nuclear asset-recovery charge on a going-forward basis. Pursuant to the financing order, any successor to DEF is required to perform all obligations and have the same rights under the financing order as DEF, including the collection of the nuclear asset-recovery charges from customers and payment of appropriate amounts to the issuer.

Municipalization

We view the risk to the ratepayer base due to municipalization as low due to the nonbypassability of the charges and the likelihood that even after a municipalization, DEF's transmission and distribution services will continue to be used. While multiple municipal utilities exist in Florida, DEF is unaware of any municipality that has municipalized, or attempted to municipalize, a portion of an investor-owned utility's service territory in the absence of an agreement. One municipality, the City of Winter Park, was municipalized pursuant to such an agreement. DEF previously had a franchise agreement that provided Winter Park with a unilateral purchase option at the expiration of the franchise agreement. In the instance of the Winter Park municipalization, DEF sought affirmative permission from the FPSC to be relieved of its obligation to serve the City of Winter Park, which the FPSC subsequently approved. Any municipality using DEF's transmission and distribution system following a municipalization will be considered a successor and its customers will be subject to the nuclear asset-recovery charge.

Storm Damage

We view the risk of reduced collections due to weather to be low, and substantially mitigated via the true-up mechanism. Hurricanes, tropical storms or wind storms may impact DEF's operations, temporarily interrupting transmission, distribution and consumption of

electricity, hence reducing the collections of nuclear asset-recovery charges. There might be longer-lasting weather-related adverse effects on residential and commercial development and economic activity in the DEF service area, which could cause the per-kWh nuclear asset-recovery charge to be greater than expected.

The only year with any significant loss of energy consumption due to natural disasters was 2004, when a series of three Hurricanes struck the DEF service area. The impacts came from "Charley" (Aug 13-20), "Frances" (Sep 4-10) and "Jeanne" (Sep 25-30). Estimated lost energy sales came from studying reduced levels of daily system requirements totaling 400,000 MWh over these three disasters. This represents about 1% of the total annual electric usage for 2004 (38,193 GWh).

Forecasting Electricity Consumption

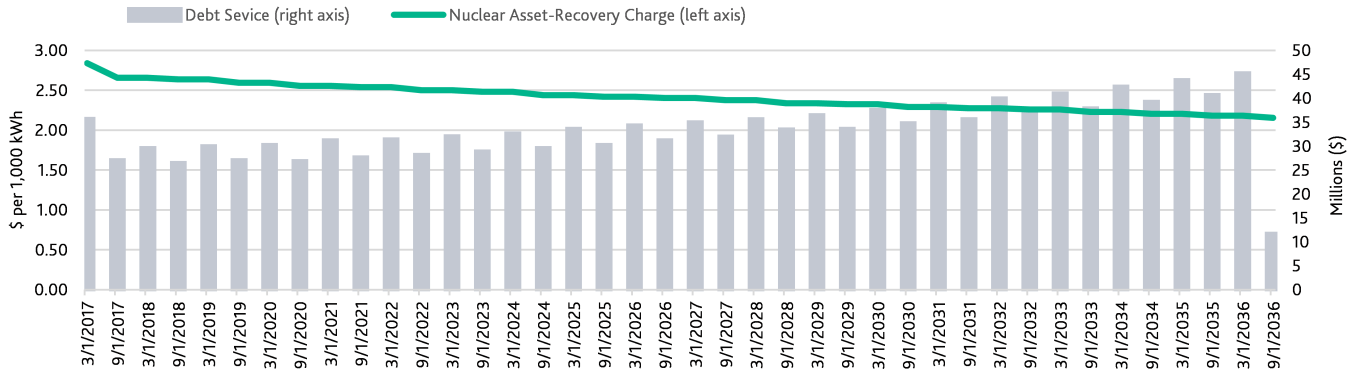
The nuclear asset-recovery charges are assessed based on forecasted customer usage. The amount and the rate of nuclear asset-recovery charge collections will depend in part on actual electricity consumption and the amount of collections and write-offs. If the servicer inaccurately forecasts electricity consumption or underestimates customer delinquency or write-offs when setting or adjusting the nuclear asset-recovery charges, there could be a shortfall or material delay in nuclear asset-recovery charge collections prior to the next true-up.

The forecast utilized in the proposed bond structure is the 2016 Ten Year Site Plan filed with the FPSC in April 2016. Internal forecasts are updated at least twice per year but are not filed with the FPSC. The DEF forecast of customers, energy sales, and peak demand applies both an econometric and end-use methodology. External sources of data include economic series from Moody's Analytics and State population data from the University of Florida's Bureau of Economic & Business Research. Internal company forecasts are used for projections of electricity price, and weather conditions. The forecast incorporates population and household trends, employment and production trends, technology and energy efficiency trends, and weather and climate trends. DEF has a more granular forecast for the phosphate industry, at the customer level, due to the high concentration of customers in this industry among DEF's industrial customer base.

Exhibit 11 shows the forecasted nuclear asset-recovery charge per 1,000 kWh and scheduled debt service payments.

Exhibit 11

Nuclear Asset-Recovery Charge and Debt Service ($ per 1,000 kWh)*



**Preliminary and subject to change based on market conditions*
Source: DEF; Moody's calculations

Forecast Variance

For there to be insufficient funds to pay ultimate principal and timely interest on the bonds, there would need to be unexpected, persistent and extensive drops in electricity consumption. Without an interim true-up adjustment, greater than 60% forecast variance would be needed leading up to any payment date to cause a payment default. Greater than 65% forecast variance would be needed in the first payment period to cause a payment default, assuming the servicer makes an interim true-up adjustment midway into the first payment period. By contrast the maximum forecast variance since 2011 has been less than 6%, as shown in Exhibit 12.

Exhibit 12
Annual Forecast Variance for Ultimate Electric Delivery (% of Forecast)

	2011	2012	2013	2014	2015
Residential	0.27%	-0.23%	-0.08%	2.14%	1.92%
Commercial	2.00%	0.82%	0.80%	1.40%	0.44%
Industrial	-3.09%	1.56%	-1.88%	3.87%	-3.25%
Public Authority	-2.40%	5.92%	0.50%	1.00%	-0.65%

Source: DEF

Cash Flow Analysis

We examined the cash flows that the nuclear asset-recovery charges will generate under various scenarios. In light of the strength of the ratepayer base, the purpose was primarily to see how high the nuclear asset-recovery charges can go as a percentage of a 1,000 kWh residential customer's bill and also to illustrate how the nuclear asset-recovery charges behave under various stress scenarios of customer demand. Our rating is primarily based on qualitative analysis of the political, legal and regulatory aspects of the securitization and the strength of the ratepayer base. However, we run these stress scenarios to confirm the level of the nuclear asset-recovery charges is consistent with other comparable transactions.

Even if the financing order is irrevocable, the nuclear asset-recovery charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. Such challenge is more likely the higher the charges, i.e., the more the economic incentive for a challenge, or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the nuclear asset-recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Even in our more extreme scenarios, the percentage of a residential customer's monthly bill devoted to the nuclear asser-recovery charge is less than 7%.

We looked at three scenarios:

Scenario Description and Projected Output

Base Scenario

1. Electricity consumption as per the projections by DEF, which increases annually by a compounded 1 - 1.5%, through bond maturity
2. Implied net charge-offs of 0.2615%
3. Collection Curve projects 13.3% of collections within 30 days and 86.4% of collections between 30-60 days
4. Servicing fee is 0.05% on an annualized basis of the original principal amount of bonds so long as the servicer remains DEF or an affiliate. While a back-up servicer has not been retained, the issuer can increase servicing fees to 0.60% to attract one if needed.

Stress Scenario 1

1. Electricity consumption decreases linearly by 5% every year until it reaches 50% of the projected consumption for residential customers and 65% for non-residential customers
2. Annual net charge-offs are the same as in base case
3. Collection curve is the same as in base case
4. Loss of 100% of the collections from the peak consumption month and 50% of the collections from the second highest consumption month each year
5. Replacement servicing fee of 0.60% per year of the initial bond balance with other expenses the same as in the base case

Stress Scenario 2

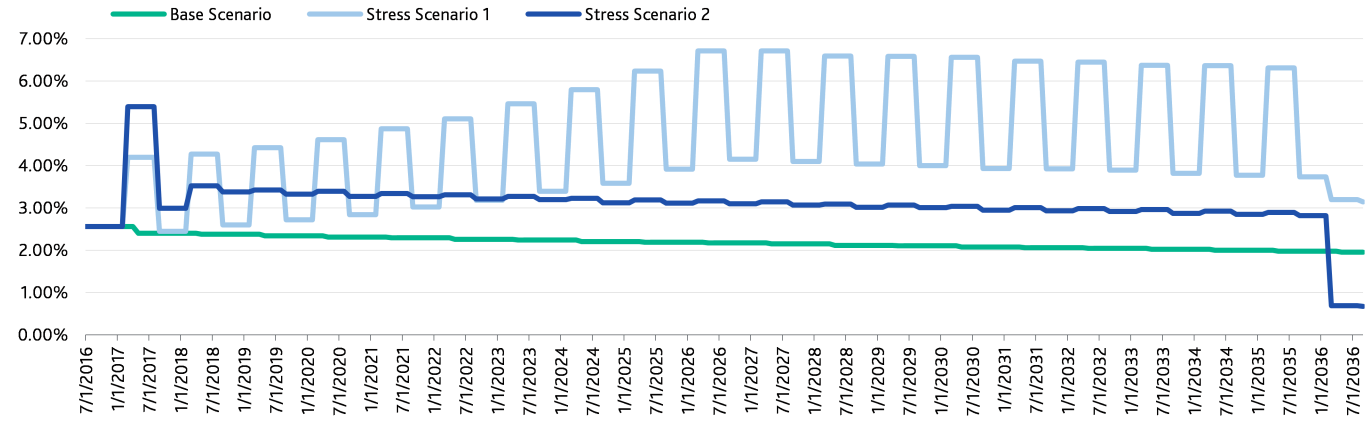
1. Electricity consumption is reduced by 25% permanently against the first year base case projection

2. Annual net charge-offs the same as in base case
3. Collection curve is the same as in base case
4. Servicing fee and all other fees the same as in base case

For all of the scenarios, the bonds are fully paid by their legal final maturity dates. Exhibit 13 shows the projected nuclear asset-recovery charge as a percentage of a 1,000 kWh residential customer's total bill, and Exhibit 14 shows the projected nuclear asset-recovery charges for customers per 1,000 kWh over the securitization's life. The periodic variance in the charges under the stress scenarios is due to the semiannual true-ups capturing seasonality in electricity usage.

Exhibit 13

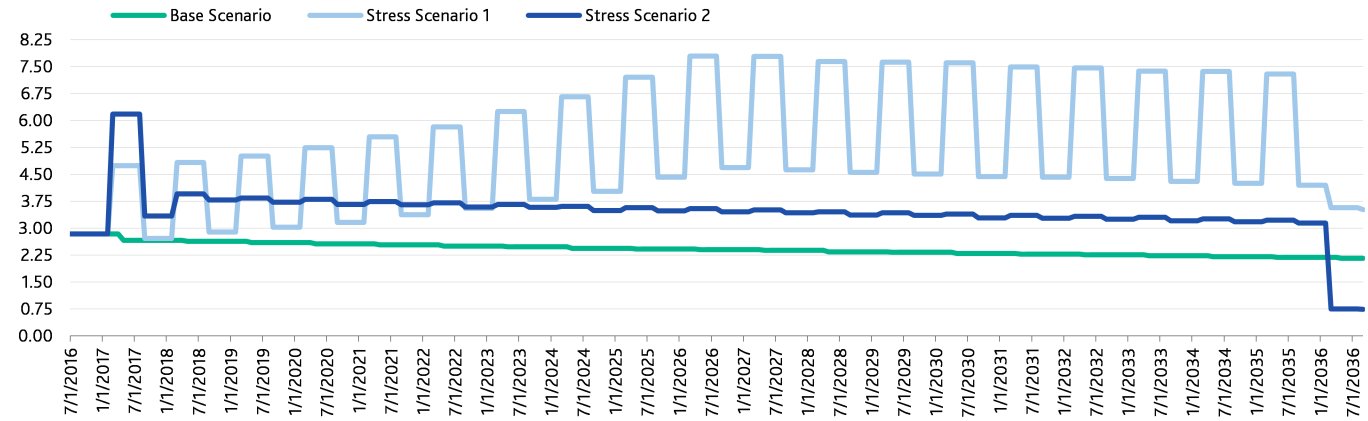
Nuclear Asset-Recovery Charge as a Percentage of a 1,000 kWh Customer's Total Bill



Source: DEF; Moody's calculations

Exhibit 14

Nuclear Asset-Recovery Charge ($ per 1,000 kWh)



Source: DEF; Moody's calculations

Comparables

As shown in Exhibit 15, stress scenario 1 is more stressful and results in a peak nuclear asset-recovery charge equal to about 6.94% of a 1,000 kWh per month customer's bill. This is low compared to other utility cost recovery deals.

Exhibit 15
Maximum Recovery Charge Comparison (% of a 1,000 kWh Customer's Bill)

Deal name	Base	Stress1	Stress2
DEF 2016-1	2.65%	6.94%	4.73%
UDSA 2016A	7.21%	16.04%	10.40%
UDSA 2015	7.00%	12.32%	7.89%

Source: Moody's

Securitization Structure Overview

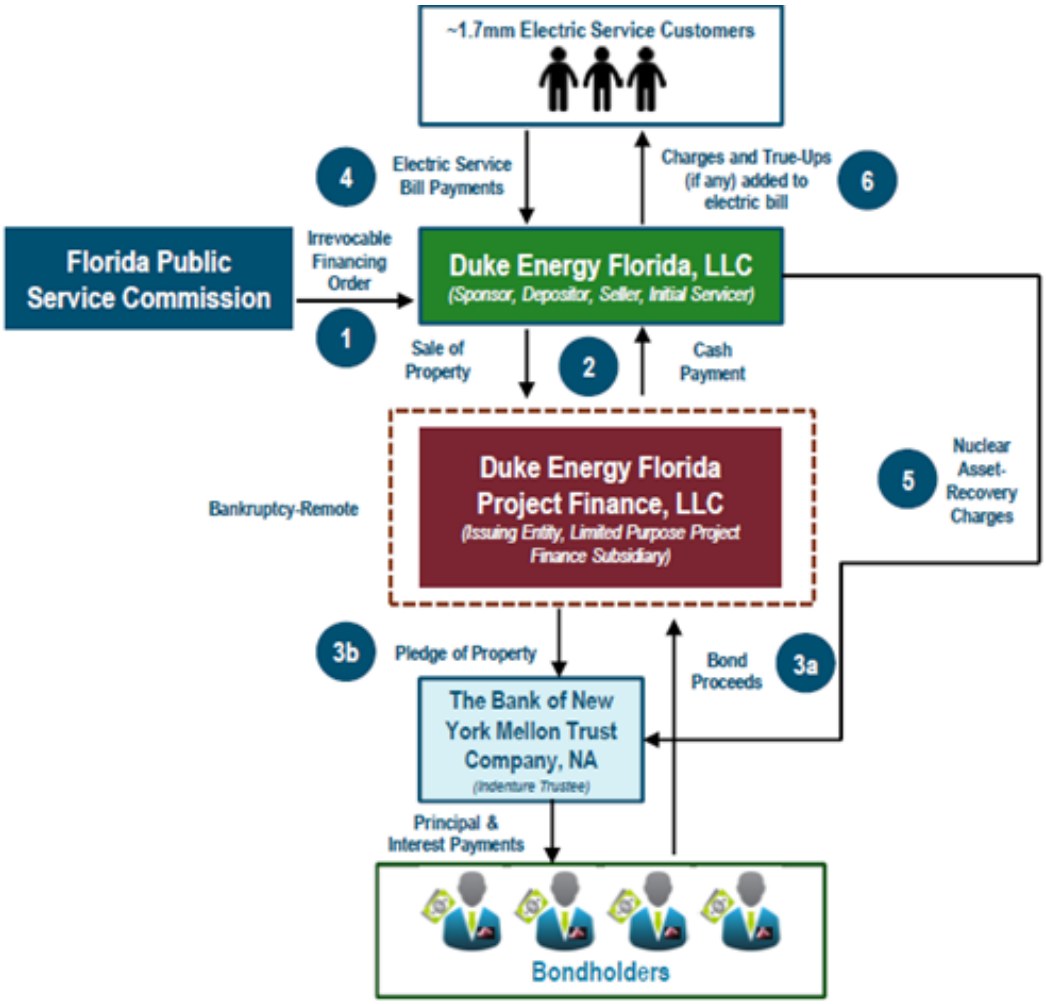
On the closing date, DEF will sell the nuclear asset-recovery property to the issuer pursuant to a sale agreement between the issuer and DEF. DEF will service the nuclear asset-recovery property pursuant to a servicing agreement between the issuer and DEF.

Securitization Structure Description

Structural Diagram

Exhibit 16 below illustrates the relationships between the transaction parties and bondholders.

Exhibit 16
Structural Diagram



Source: DEF

1. FPSC issues financing order, permitted under state statute, that creates nuclear asset-recovery property in the hands of DEF
2. Via a true sale, DEF transfers the nuclear asset-recovery property to the issuer in exchange for cash payment
3. (a) Nuclear asset-recovery bonds issued in exchange for cash payment from bondholders (b) Nuclear asset-recovery property is pledged to indenture trustee for benefit of the bondholders
4. Electric utility customers pay charge on electricity bills on joint and several basis
5. Payments from electric utility customers used to pay principal and interest on the bonds
6. At least semi-annually, and, as frequently as monthly (any time), charge on all electricity customers adjusted to whatever level necessary (i.e., not subject to cap) to ensure timely principal and interest payments on the bonds

Detailed Description of the Structure

Credit Enhancement

Credit enhancement for the bonds will be provided by the true-up mechanism, as well as by the capital subaccount. The primary purpose of the excess funds subaccount is not to provide credit enhancement for the bonds but to hold funds collected in amounts that were more than necessary to pay current debt service. However, amounts in the excess funds subaccount may be used to make debt service payments on the bonds when needed.

Capital Subaccount

On or before the date of issuance of the bonds, DEF will make a capital contribution to the issuer in an amount not less than 0.5% of the initial principal amount of the bonds, which will be deposited in the capital subaccount. Under the financing order, DEF will be entitled to a return on this capital contribution equal to the rate of interest on the latest maturing bond and payable according to the priority of payment set forth in the indenture and the series supplement.

Cash Commingling

The servicer is entitled to commingle the nuclear asset-recovery charges that it receives with its own funds until the funds are remitted to the indenture trustee on a daily basis. The securitization law provides that the priority of a lien and security interest is not impaired by the commingling of funds arising from nuclear asset-recovery charges with other funds.

The servicer will remit nuclear asset-recovery charges based on estimated collections using a weighted average balance of days outstanding on DEF's retail bills. Nuclear asset-recovery charge collections remitted will represent the charges estimated to be received for any period based upon the average days outstanding and an estimated system-wide write-off percentage.

No less often than annually, the servicer and the indenture trustee will reconcile remittances of estimated nuclear asset-recovery charge collections with actual payments received. To the extent the remittances of estimated payments exceed the amounts that should have been remitted, the servicer will be entitled to withhold the excess amount from any subsequent remittance. To the extent the remittances of estimated payments are less than the amount that should have been remitted, the servicer will remit the amount of the shortfall to the indenture trustee within two business days.

Payment Priority

On each payment date, the indenture trustee will pay all amounts on deposit in the general subaccount of the collection account in the following order of priority:

1. payment of the indenture trustee's fees, expenses and outstanding indemnity amounts in an amount not to exceed annually $500,000 in the then current calendar year;
2. payment of the servicing fee plus any unpaid servicing fees from prior payment dates;
3. payment of the administration fee to the extent due on that payment date and of the fees of our independent manager plus any unpaid administration or management fees from prior payment dates;

4. payment of all of our other ordinary periodic operating expenses;
5. payment of the interest then due, including any past-due interest;
6. payment of the principal required to be paid on the final maturity date for each series or as a result of acceleration upon an event of default;
7. payment of the principal then scheduled to be paid in accordance with the expected sinking fund schedule, including any previously unpaid scheduled principal, paid pro rata among the bonds if there is a deficiency;
8. payment of any of our remaining unpaid operating expenses and any remaining amounts owed pursuant to the basic documents;
9. replenishment of any amounts drawn from the capital subaccount;
10. release to DEF of an amount equal to the rate of return on the amount contributed to the capital subaccount, including any portion of such rate of return for any prior payment date that has not yet been paid, so long as no event of default has occurred and is continuing; and
11. allocation of the remainder collected, if any, to the excess funds subaccount for future payments.

Events of Default

An event of default with respect to the bonds is defined in the indenture as any one of the following events:

1. a default for five business days in the payment when due of any interest on any bond;
2. a default in the payment of the then unpaid principal with respect to any series on the final maturity date for that series;
3. a default in the observance or performance of any covenants or agreements made by the issuer in the indenture or the series supplement (other than defaults described above) which continues for 30 days;
4. any representation or warranty made by the issuer having been incorrect in any material respect as of the time made, and such breach not having been cured within 30 days;
5. certain events of bankruptcy, insolvency, receivership or liquidation with respect to the issuer; or
6. a breach by the State of Florida or any of its agencies (including the FPSC), officers or employees that violates the pledge of the State of Florida.

Issuance of Additional Bonds

As authorized by the financing order, the issuer's organizational documents and the transaction documents give the issuer authority and flexibility to issue additional nuclear asset-recovery bonds in future transactions, with the approval of the FPSC. Each series of nuclear asset-recovery bonds that may be issued will be backed by separate nuclear asset-recovery property the issuer acquires for the separate purpose of repaying that series. Any new series of such securities may include terms and provisions that would be unique to that particular series of nuclear asset-recovery bonds. However, the issuer may not issue additional nuclear asset-recovery bonds unless the rating agency condition for the bonds has been satisfied.

Asset Transfer, True Sale and Bankruptcy Remoteness

The securitization law provides that an electric utility's transfer of nuclear asset-recovery property is a true sale and is not a pledge of or a secured transaction relating to the electric utility's right, title and interest in the nuclear asset-recovery property (other than for federal and state income and franchise tax purposes) and that legal and equitable title passes to the transferee, if the agreement governing that transfer expressly states that the transfer is a sale or other absolute transfer.

The issuer's limited liability company agreement requires that it have at least one independent manager, whose selection and replacement will be subject to ratification by the FPSC. The limited liability company agreement does not permit the issuer to engage in any activities not directly related to purchasing and owning the nuclear asset-recovery property and issuing one or more series of nuclear asset-recovery bonds. The list of permitted activities set forth in the limited liability company agreement may not be altered,

amended or repealed without the affirmative vote of a majority of the managers, which vote must include the affirmative vote of the independent manager.

Sponsor and Seller

DEF is the sponsor of the transaction and the seller of the nuclear asset-recovery property. DEF, a Florida limited liability company, is a regulated public utility primarily engaged in the generation, transmission, distribution, and sale of electricity in portions of Florida. DEF is an indirect, wholly-owned subsidiary of Duke Energy Corporation, one of the largest regulated utility holding company in the US.

DEF is subject to the jurisdiction of the Florida Commission with respect to retail utility rates, accounting, utility services, certain facilities, certain asset transfers, certain corporate mergers and other matters. DEF is subject to the jurisdiction of the Federal Energy Regulatory Commission under the Federal Power Act with respect to acquisitions, operations and disposals of certain assets and facilities, services provided and rates charged, conduct among affiliates and other matters, and its nuclear power plant is also subject to the jurisdiction of the Nuclear Regulatory Commission.

Administrator

DEF will provide or arrange for the provision of administrative services to the issuer pursuant to an administration agreement, including services relating to the preparation of financial statements, required filings with the SEC, any tax returns the issuer might be required to file, qualifications to do business, and minutes of the issuer's managers' meetings. DEF, as administrator, will be entitled to receive an annual administration fee of $50,000 payable annually, in arrears. The administrator may not resign or be removed without satisfaction of the rating agency condition.

Securitization Structure Analysis

The Series A bonds are a relatively simple sequential structure without subordination and the capital subaccount provides sufficient funds to offset the typical variance in collections versus projections in order to meet the projected amortization schedule between the semi-annual true-ups.

Methodology and Monitoring

The principal methodology used in this rating was Moody's Approach to Rating Securities Backed by Utility Cost Recovery Charges published in June 2015. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

Other methodologies and factors that may have been considered in the process of rating this issue can also be found in the Rating Methodologies sub-directory on www.moodys.com.

In monitoring this transaction, we apply the key components of our methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialize, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

We also follow the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of DEF (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

Thus changes in our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating

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MOODY'S
INVESTORS SERVICE

Standard & Poor's Reviews, Affirms, 68 Classes From 31 Stranded Cost Transactions

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OVERVIEW

- We affirmed our ratings on 68 classes from 31 stranded cost securitizations.
- All of the transactions are backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts supporting our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations.

NEW YORK (Standard & Poor's) Feb. 25, 2013--Standard & Poor's Ratings Services today affirmed its ratings on 68 classes from 31 stranded cost securitizations (see list).

The affirmations reflect the transactions' ongoing stable performance and their continued ability to pay interest and principal in a manner commensurate with an 'AAA (sf)' rating stress, in our view.

Stranded cost securitizations are typically backed by stranded assets created by statute with credit enhancement provided by true-up mechanisms and reserve accounts. As currently constructed, the enhancement supports our 'AAA (sf)' ratings in accordance with our criteria for stranded cost securitizations. These securities traditionally have been created under state legislation in conjunction with the state utility commission, with the utility as the

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seller/servicer of the assets. Key features of the deals include:

- There are irrevocable statutory provisions and regulatory approvals, including the creation of mandatory periodic true-up of a nonbypassable transition charge and an absolute transfer and first-priority security interest in transition property;
- The true-up mechanisms are in place to ensure the transition charge can be adjusted to reflect any deficit in collections, as well as any other credit enhancement accounts; and
- There are typically cross-collateralization features such that all the customer classes help pay down the bonds. There may be certain deals that have rate caps and/or do not allow cross-collateralization.

For more information on legal and economic defeasance, please see "Securitizing Stranded Costs," published Jan. 18, 2001 on RatingsDirect.

As part of our regular surveillance, we reviewed and affirmed 68 classes from 31 stranded cost transactions.

Standard & Poor's will continue to monitor the securitizations and take rating actions as we deem necessary according to our criteria.

STANDARD & POOR'S 17G-7 DISCLOSURE REPORT

SEC Rule 17g-7 requires an NRSRO, for any report accompanying a credit rating relating to an asset-backed security as defined in the Rule, to include a description of the representations, warranties and enforcement mechanisms available to investors and a description of how they differ from the representations, warranties and enforcement mechanisms in issuances of similar securities. The Rule applies to in-scope securities initially rated (including preliminary ratings) on or after Sept. 26, 2011.

If applicable, the Standard & Poor's 17g-7 Disclosure Report included in this credit rating report is available at http://standardandpoorsdisclosure-17g7.com

RELATED CRITERIA AND RESEARCH

- Standard & Poor's To Explicitly Recognize Credit Stability As An Important Rating Factor, Oct. 15, 2008
- Principles-Based Rating Methodology for Global Structured Finance Securities, May 29, 2007
- Legal Criteria For U.S. Structured Finance Transactions: Special-Purpose Entities, Oct. 1, 2006
- Securitizing Stranded Costs, Jan. 18, 2001

RATINGS AFFIRMED

AEP Texas Central Transition Funding II LLC
A
Rating

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A2	AAA (sf)
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

AEP Texas Central Transition Funding LLC
2002-1

	Rating
A-4	AAA (sf)
A-5	AAA (sf)

Atlantic City Electric Transition Funding LLC
2002-1

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Atlantic City Electric Transition Funding LLC
2003-1

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Centerpoint Energy Restoration Bond Company, LLC

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

CenterPoint Energy Transition Bond Company II LLC
A

	Rating
A3	AAA (sf)
A4	AAA (sf)
A5	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

CenterPoint Energy Transition Bond Company LLC
2001-1

	Rating
A4	AAA (sf)

2008

	Rating
A-1	AAA (sf)
A-2	AAA (sf)

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Consumers Funding LLC
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Detroit Edison Securitization Funding LLC (The)
2001-1

	Rating
A-5	AAA (sf)
A-6	AAA (sf)

Entergy Gulf States Reconstruction Funding I LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Entergy Texas Restoration Funding, LLC
Senior Secured Transition

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)

FPL Recovery Funding LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding II LLC
2006-A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

JCP&L Transition Funding LLC
2002-A

	Rating
A-3	AAA (sf)
A-4	AAA (sf)

Louisiana Public Facilities Authority-EGSL
2008

	Rating
A-1	AAA (sf)

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A-2	AAA (sf)
A-3	AAA (sf)

Louisiana Public Facilities Authority-ELL
2008

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

Massachusetts RRB Special Purpose Trust 2005-1
2005-1

	Rating
A-4 BEC	AAA (sf)
A-4	AAA (sf)
A-4 CEC	AAA (sf)

Massachusetts RRB Special Purpose Trust WMECO-1

	Rating
A	AAA (sf)

MP Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

MP Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PE Environmental Funding LLC
A

	Rating
A-1	AAA (sf)
A-2	AAA (sf)
A-3	AAA (sf)
A-4	AAA (sf)

PE Environmental Funding LLC
B

	Rating
Series B	AAA (sf)

PSE&G Transition Funding II LLC
2005-1

	Rating
A-3	AAA (sf)

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A-4	AAA (sf)

PSE&G Transition Funding LLC
2001-1

	Rating
A-6	AAA (sf)
A-7	AAA (sf)
A-8	AAA (sf)

PSNH Funding LLC
2001-1

	Rating
A-3	AAA (sf)

Rockland Electric Company Transition Funding LLC
2004-1

	Rating
2004-1	AAA (sf)

RSB BondCo LLC
A

	Rating
A-2	AAA (sf)
A-3	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2003-1

	Rating
A-4	AAA (sf)

TXU Electric Delivery Transition Bond Company LLC
2004-1

	Rating
A-3	AAA (sf)

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Securitizing Stranded Costs

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Securitizing Stranded Costs

*(**Editor's Note:** We originally published this criteria article on Jan. 18, 2001. We've republished it following our periodic review completed on Dec. 1, 2016. As a result of our review, we updated the contact information and the related criteria, and corrected a reference in the section "Adequate Provision.")*

Electric utilities historically have enjoyed protected monopolistic status, in return for an obligation to provide service to the customer base whenever requested. In return, utilities have made significant long-term investments and entered into long-term power purchase contracts with the expectation that these would be recoverable through customer rates. In 1992, the enactment of the National Energy Policy Act introduced wholesale electric competition into the industry. Since then, almost half the states have taken steps toward a competitive retail market by legislating or ordering frameworks for "retail access," through which all customers will be able to choose their own electric generation supplier. With a competitive market taking shape, many utilities have found themselves saddled with significant unrecoverable contractual and sunk costs, generically known as stranded costs. These stranded costs are not new, but rather have already been approved by regulators and are incorporated in existing utility rates as part of traditional cost-plus regulation. If utilities are to compete in a deregulated market, however, they cannot pass these stranded costs along to customers. In many cases, the inability of a utility to recover a significant portion of these costs would result in significant financial deterioration, and in the worst cases, insolvency.

As noted, many legislatures and state regulatory commissions have established the means by which utilities can avert financial deterioration while also providing customers with lower rates. Asset-backed securitization is one such alternative. In several states, such as California, Pennsylvania, Massachusetts, Texas, New Jersey, Michigan, New Hampshire, Connecticut and Illinois, legislatures have enacted laws that enable utilities to finance the recover-y of at least a portion of their stranded costs by issuing bonds backed by a statutory right to recover stranded costs.

In December 1997, the three California investor-owned utilities: Pacific Gas & Electric Co., Southern California Edison Co., and San Diego Gas & Electric Co., securitized more than $6 billion of their approximately $28 billion of total stranded investment. During 1998, Illinois Power Co. securitized $864 million followed by Commonwealth Edison Co.'s $34 billion securitization transaction. In 1999, one Massachusetts utility and three Pennsylvania utilities completed securitization transactions. Boston Edison Company issued $725 million of rate reduction certificates. PECO Energy Co. issued $4 billion, PP & L Inc. issued $2.42 billion and West Penn Power Company issued $600 million of transaction bonds. In 2000, PECO issued an additional $1 billion and in 2001, utilities in New Jersey, Connecticut, Michigan, and Texas may come to market with rate reduction bonds.

Utilities in states that have not yet addressed industry restructuring through legislative action or regulatory order, such as Indiana, Kentucky, Florida, and North Carolina, are generally low-cost producers with limited, if any, stranded assets. These states are much less motivated, therefore, to pursue industry restructuring, let alone securitization, at the present time. Whether or not these states ultimately pass relevant legislation, however, the relative competitive standing of their utilities will inevitably be diluted as high-cost utilities in other states shed a substantial portion of their high-cost assets through securitization.

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Standard & Poor's believes that securitization of stranded costs is at least neutral, and generally positive for utility credit quality. The utility acquires cash up front, instead of receiving an increasingly at-risk revenue stream over time. Proceeds of the securitization are expected to be used principally to shrink a utility's total capitalization structure, including retiring debt that carries a higher coupon than that borne by the highly rated securitized bonds. In most cases, these interest savings are passed along directly to customers in the form of lower rates. Generally, the amount of rate reduction bonds that the utilities issued was designed specifically to generate a legislatively mandated rate reduction for customers.

Business and Legal Overview

What Are Stranded Costs?

Stranded costs are broadly defined to include any costs that were incorporated in the traditional regulatory cost-plus scheme that cannot be passed on to customers in a competitive marketplace. The most significant of these stranded costs are investments in high-cost nuclear and fossil plants. They also include deferred and capitalized operating costs, conservation and economic development expenditures, nuclear decommissioning costs, and long-term contractual obligations with high cost nonutility generators.

In the past, utilities constructed large, centrally located plants to gain economies of scale in producing electricity. Extremely long construction lead times and overly aggressive demand forecasts caused management to err on the side of oversupply to meet customer demand. Furthermore, the monopoly environment meant utilities lacked a strong incentive to contain costs. Indeed, the larger a utility's rate base was, the more investment on which the utility could earn a return. In addition, costs were exacerbated by circumstances. The last round of base-load construction occurred in the late 1970s and early 1980s, which was an era of high inflation and high interest rates. Finally, the nuclear incident at Three Mile Island in 1979 resulted in heightened Nuclear Regulatory Commission supervision, extending the timetable for plant completions and elevating capital costs significantly.

Since that time, new technologies have greatly reduced the cost of building generating facilities. Even more importantly, the economics of building smaller plants have continued to advance. The lead time for construction has been drastically reduced, from as much as 10 years to as little as 18 months. This reduction is in part due to the construction of much smaller-scale highly efficient plants. As a result, the cost of incremental generation today is significantly lower than the embedded cost of plant of most utilities. The differential is most evident in nuclear plants. For instance, the 1,143 megawatt (MW) Nine Mile Point 2 nuclear plant, operated by Niagara Mohawk Power, was completed in 1988 at a cost of about $5,000 per kilowatt (kW), after a construction period of more than 10 years. This compares with a 500 MW gas-fired combined-cycle plant today that can be built in about 18 months at a cost of $450 to $550 per kW. While prudency hearings did lead to significant write-offs during the rate base proceedings of Nine Mile Point 2, the bulk of these costs were simply included in rates and are now being recovered from customers over a lengthy period of time.

Developments in Industry Environment

The enactment of the National Energy Policy Act of 1992 (NEPA) marks the beginning of the end of the last major government-protected monopoly. NEPA authorized the Federal Energy Regulatory Commission (FERC) to mandate

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that utilities become open-access common carriers for wholesale electric sales, known as wholesale wheeling. Wholesale sales are bulk power sales between utilities or between a utility and a third-party producer. If two utilities are not interconnected, they would need access to a third party's transmission network to complete such a transaction.

The ability of a utility to sell power to an end user that is not within its franchise service territory, or the sale of power from an independent power producer to an end user, is called "retail wheeling." Currently, utilities are not permitted to engage in retail wheeling. However, retail customers, aware that there may be cheaper power sources than their current supplier, are pressuring state regulators to permit them to buy power from alternative suppliers. While most regulators agree that competition will lower the price of power, some assert that the objective is not merely to lower rates, but to provide customers with the option to choose their power provider. The vast majority of utilities and regulators concur that retail wheeling is inevitable, so states have had to grapple with how to make the transition from a regulated to a competitive environment. As mentioned earlier, many states have passed laws to phase in direct access to all customers and most of these legislative initiatives include securitization of stranded costs as a means of reducing utilities' financial exposure to a competitive retail environment.

Recovery of Stranded Costs

Vertically integrated electric utilities provide customers with three basic functions: generation, transmission, and distribution. Because of legal, regulatory, and technological advances, generation no longer displays monopoly characteristics. Transmission and distribution, or the "wires" function, on the other hand, will likely remain natural monopolies for the foreseeable future since it would be prohibitively expensive, and environmentally difficult, to construct redundant wires. Transmission consists of the high-voltage system that moves power in bulk from generating plants to an electric distribution system or a load center. Distribution receives stepped-down power, which is then transported at lower voltages to individual end users.

As part of various state legislative initiatives, utilities are being required to functionally, if not legally, disaggregate the vertically integrated components of their business. The costs of each function will be determined and itemized, or "unbundled," on customers' bills. While customers may purchase the actual electrons from a source other than their local utility, they must continue to transport this power over the distribution wires owned by their local utility. The local utility will use its wires system to charge customers for the services it provides, which will include transmission of power bought from other suppliers. Other services, such as billing and metering, could be maintained by the utility or could be opened to competition as well. Any stranded cost that is identified, isolated, and by mandate recoverable in utility rates, will also be recovered as a "wires charge;" it cannot be recovered as part of a generation charge, since customers may purchase generation from an alternative source.

Stranded costs, which have been realized as such only with the prospect of a competitive market, are included in current utility rates, but they are being amortized over as long a period as 30 to 40 years. Utilities need to accelerate the recovery of these above-market costs as quickly as possible if they are to lower their rates in preparation for a competitive environment.

Statutory Securitization of Stranded Costs

Until now, securitization of stranded assets has been made possible by state statute. In general, such statutes provide that the stranded assets themselves, plus interest on any bonds backed by stranded assets, the costs of servicing the

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bonds, and the costs of bond issuance all be collected through imposition of a tariff that is collectible from the utility's customers. While differing in particulars, the legislation in Pennsylvania, California, Illinois, Massachusetts, Texas, Connecticut, New Jersey, and elsewhere shares certain characteristics that are significant from a rating perspective.

The statutes specifically provide for securitization of the stranded costs through their sale to a financing subsidiary, and ultimately, to a trust that issues the bonds. The statutes award true sale status to the transfer of the stranded assets to a finance subsidiary. This should help support the legal conclusion that the transfer constitutes a true sale for bankruptcy purposes.

The statutes also provide that any proposal for a securitization of stranded assets be approved on an irrevocable basis by the relevant utility regulatory commission. The commission must set a tariff schedule. A tariff would be included in the ordinary bills sent to customers, and would amortize the stranded assets over the life of the proposed securitization. The tariff would be a separate itemized charge on the customer's bill, and could be either a fixed charge or tied to electricity usage, in either case included in the utility's wires charge. In scheduling the tariff needed to amortize the assets fully, the commission will take into account the utility's forecast regarding the projected size and demographics of its customer base. Where the tariff is tied to electricity usage, predicted customer usage will be important.

The tariffs that are actually collected from customers may fall short of what was originally anticipated. In addition to defaults in bill payments, the customer base might decline due to economic and/or technological factors, or usage might vary from what was originally predicted. This might happen, for instance, if the winter is unusually warm or the summer particularly cool. These are credit risks that could impact the ability of the tariff to amortize the assets fully. To address these risks, the legislatures have created a statutory form of credit support, known as the "true-up" mechanism. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers, so that the bond amortization schedule is met. This minimizes credit risk, except in the tail end of the transaction after the final true-up has occurred. Liquidity risk will, of course, exist during the periods between true-ups, to the extent that collection shortfalls occur.

The true-up mechanism also may effectively minimize prepayment risk. While there may be a tariff collection shortfall, it is also conceivable that excess collections may be received. This might occur, for example, if the customer base grows at a greater rate than originally anticipated when the tariffs were established. If collections exceed expectations for a particular period, the true-up mechanism could potentially reduce the remaining tariffs accordingly, so that the remaining transaction amortizes as scheduled.

When the utility applies for a true-up, the commission may not grant it immediately. The commission's delay will add to liquidity risk, because the shortfalls in collections to be remedied by the true-up will last for a longer period, until the commission finally grants the true-up. A delay by the commission will not create credit risk during the transaction, because once the true-up is in place, the adjusted tariff will take into account any collection shortfalls caused by its delay. But a delay in the true-up could result in a credit loss at the tail end of the transaction. The commission might take so long to grant the true-up that the final true-up never occurs. The statutes prevent this potential credit loss, as well as limit liquidity risk caused by a delay, by setting a deadline for implementation of the true-up. For example, California requires that the commission implement a true-up within 90 days of each anniversary date of the

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transaction. Other statutes simply require that the true-up filing with the commission becomes effective as early as the subsequent month.

The duration of these transactions and the ability to impose true-up periods and tariff collections indefinitely depend initially on whether the statutes impose a limit on how long the tariff may be collected from the utility's customers. Even where no limit is set as a statutory matter, the final true-up period, and the deadline for tariff collection, will depend on the legal final maturity date set for the bonds.

A utility might change hands for some reason, or file under Chapter 11 of the U.S. Bankruptcy Code. Such an event could strike at the heart of a potential securitization. Stranded assets will not be recovered unless the utility continues to provide electricity, bill its customers, transfer the tariff to the securitization trust, and apply for true-ups when necessary. The statutes address this problem by requiring that any successors to the utility, whether through bankruptcy, merger, or sale, must perform all of the utility's obligations in connection with the securitization.

The statutes provide another feature, by providing that, contrary to what would usually occur under the Uniform Commercial Code (UCC), there is a continued security interest in collections that have been commingled with other funds of the utility. This eliminates the usual credit risk associated with commingled funds in the event of a bankruptcy of the utility, although it fails to alleviate the liquidity risk and potential credit risk caused by the automatic stay (see Protection Against Credit Risk Caused By Commingling).

Finally, the statutes purport to create new property interests that must be perfected in a manner different from a UCC security interest. However, there is the possibility that stranded assets might still be considered subject to the prior lien of existing mortgage bonds. As a result, proceeds of the securitization might need to be applied to pay down the debt secured by the prior lien. This would, in any event, be positive from a credit perspective, because the bonds being retired (typically general obligation bonds bearing the rating of the utility) would have a higher interest rate than the 'AAA' rated securitized bonds used to retire the obligations.

Significance of Statutory Securitization

To date, stranded cost securitizations rated by Standard & Poor's have been based on legislation promulgated specifically for that purpose. Nevertheless, Standard & Poor's understands that, as a regulatory matter, state public utility commissions have, de facto, historically permitted recovery of stranded costs through rate adjustment.

While public utility commission regulatory action may well be sufficient to accomplish a securitized recovery of stranded costs, Standard & Poor's believes that there may be certain advantages to a legislation-backed securitization. Statutes have the benefit of having undergone the political process. Affected interests are given the opportunity to introduce, and argue for, their respective views. Hearings, drafting and amendments, floor debate, and overall legislative, and press and public scrutiny is the process by which political compromise is achieved and consensus built. The political process is viewed as investing the resulting legislation with a considerable degree of stability and support.

Viewed from the perspective of legal capacity, legislation has other advantages. At the heart of stranded cost securitization is the creation of a property right in the transition charges that serve as the basis for debt service. While it is clear that state legislatures are empowered by due process of law to create property rights, and to define and record how these rights are to be enjoyed, the ability of a state public utility commission to achieve the same end by

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regulatory compact may not be as certain.

Statutory status provides both constitutional and political protection against the risk that the creation and pledge of securitization property might be impaired by subsequent amendment. Historical precedent indicates that a legislature is unlikely to reverse itself once it has enacted a statute. Even if a political reversal were to occur, the Pennsylvania, Massachusetts and California statutes recognize that the bondholders possess certain constitutionally protected rights. Both statutes provide that if the right to recover stranded assets is compromised in any way, the bondholders are entitled to adequate compensation.

Nevertheless, in jurisdictions where public utility commissions may reasonably be viewed to have the capacity and authorization to order a recovery of stranded costs through a securitization-type procedure, and in which the commission has a stable history of consistent regulatory action, and in which the courts have paid regular deference to commission order, Standard & Poor's will consider regulatory-based recovery procedures case by case. However, any such consideration will necessarily involve a comparison by Standard & Poor's of the proposed regulating action and its enactment in contrast to rated, statute-based recovery plans.

Overview of Stranded Cost Securitization

Differences From Traditional Asset-Backed Transactions

Several key aspects differentiate the securitization of stranded costs from the securitization of more conventional asset types.

Cash Flow Receivables In a typical securitization, the originator of the assets transfers a pool of receivables to a trust and receives payment based on an agreed-upon value for those receivables. The key in this case is that the receivables have already been created. In contrast, stranded assets are not traditional receivables. Although the statutes create a present property right to future collection there is no initial cash flow backing the debt. Stranded assets represent the present right to the cash flow from receivables that will be created in the future when performance, in this case power generation and delivery, has been provided. But until this performance by the utility company takes place, the customer is not obligated to make any payments. Power generation is thus critical to assure full and timely payment to securityholders. As a result, there is a greater dependence on the utility as seller/servicer to do more than just collect payments on existing receivables and liquidate collateral to the extent needed.

Dependence on Servicer Servicer bankruptcy filings generally cause a change in servicer in most asset-backed transactions to prevent any disruptions in the required servicing and collections on the portfolio. Therefore, a substitute servicer must be ready and willing to take over all servicing responsibilities, if necessary. But unlike in typical securitizations, the transaction cannot fully rely on a substitute servicer. A utility does not just collect payments; it must continue to provide power. Because provision of electricity is fundamentally a necessary service, however, Chapter 7 liquidations are unlikely. In contrast, utilities will continue to operate in Chapter 11 reorganization, and thus, provide power and enforce collection from customers. Security is provided by the statutory mandate that collection obligations must be assumed by any successor corporation, including successors pursuant to reorganization, or otherwise. Due to the regulated nature of the industry a state-by-state review of successor servicing arrangements will be performed by Standard & Poor's.

True-up as Credit Support Credit support is entirely structured within the finances of the typical securitization. In contrast, in these transactions credit support has been provided by the statutory true-up mechanism. The parties must initially come up with a proposed amortization schedule. This schedule determines the tariff to be charged to recover

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the stranded costs, as well as the costs of the securitization itself. In setting this tariff schedule, the utility makes certain assumptions about charge-offs and sales over the following year or even decade. These assumptions will necessarily be inaccurate, especially as the date of forecast becomes increasingly remote. As a result, the stranded costs collected from customers could be less than those needed to repay the bonds. The true-up addresses this risk. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers. This effectively eliminates credit risk, except in the tail end of the transaction after the final true-up has occurred.

It should be understood that the true-up is not quite the same thing as an unlimited cash collateral account. Because the true-up will only be as good as collections in the following year, the amount of a current year's shortfall will not be fully recovered in the next year, due to charge-offs and forecast error occurring in that year. The amount will decrease over time, however, as successive true-ups are implemented. Where statutes do not place a limit on the tenor of the bonds and permit indefinite true-ups, the legal final maturity can simply be extended as a structural matter to gain the benefit of additional true-ups. This allows for as many true-ups as necessary to reduce the shortfalls that cannot be collected because they occur in what may have been originally contemplated as the final year of the transaction.

The true-up can make the amortization schedule for the bonds more predictable, unless dramatic consumption changes occur. This is because the true-up may adjust the amount payable to the trust by the customer base to the extent that there has been a shortfall or surplus in the prior period.

Perfection Mechanisms As stated above, the statutes provide for their own methods and location for filing and perfecting stranded assets. This may or may not result in the conclusion that stranded assets are new property interests not subject to UCC filing and priority rules, and thus are not subject to prior liens under the UCC.

Overcollateralization as Additional Credit Enhancement As mentioned earlier, the true-up mechanism will play an integral role in the transaction structure. The frequency of the true-up, for example, will influence the need for additional credit enhancement. Overcollateralization is the most likely form of credit support. Overcollateralization would cover the risks in the stub period following the final true-up, as well as make up for past shortfalls in collections that were never fully trued-up in the past.

Sale Accounting and FAS 125 Stranded cost securitizations do not possess sale status as an accounting matter under FAS 125. The Security Exchange Commission's Office of Chief Accountant has indicated that while the utilities may be able to sell the right to recover stranded costs as a legal matter, they will not be able to remove the assets (and associated debt) from their balance sheets under FAS 125. Nevertheless, as long as the transaction is structured as a true sale for legal purposes, Standard & Poor's will "back out" for analytical purposes nonrecourse debt and associated carrying costs from the utility's consolidated financial statements. While off-balance-sheet treatment would have enabled a more clear-cut analysis, Standard & Poor's will attempt to recognize the economic (as opposed to the accounting) reality.

Debt for Tax Treatment Any utility intending to securitize stranded costs will likely seek a private letter ruling from the IRS that states that the sale of the assets constitutes a "debt for tax transaction." In other words, the sale would not result in the immediate recognition of income. If the sale were deemed to provide immediate income, the utility would incur an immediate tax liability as well. This would destroy the economics of a securitization.

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The Rating Approach

Specific credit and legal risks that arise in securitizing stranded costs are addressed below. Standard & Poor's pursues a general rating methodology that attempts to stress in cash flows the ability of the true-up mechanism to ensure timely payment of interest and repayment of principal. In addition, it attempts to determine the number of true ups needed to meet these payments, that is, the structure's ability to meet its legal final maturity.

Credit Risks

Inaccuracy in Forecasting As mentioned earlier, the funds necessary to pay the stranded assets of the issuer are dependent on the tariff set by the commission and collected from the utility's customers. Tariff schedules are compiled for each customer class so that, taken together, the tariffs charged will amortize the stranded assets over the life of the securitization, while making timely interest payments. The tariff amounts themselves are based on estimates of cash flows to be collected from the customer base. The tariff amounts are thus determined based on such factors as the utility's forecast of population growth or decline, and seasonality in expected usage.

A shortfall in tariff collections can be caused by lower than expected usage due to:

Unanticipated customer migration (anticipated migration is included in the forecasting). Residential and small business customers are considered low risk in terms of customer migration. Large industrial customers, on the other hand, are considered a significant risk that requires additional stress to the cash flows (see Cash Flows). Additionally, as the term of transition bond issued exceeds the 6-8 years historically seen, technology driven customer migration increases significantly and begins to impact usage from commercial and small business customers.

Unanticipated weather conditions. Seasonal weather fluctuations are studied, and typically accounted for in setting the tariff charge.

Forecast error negatively impacts liquidity on the bonds and may "push out" the maturity of the bonds by requiring additional true-ups before the bonds can be paid out. To capture this risk, historical forecasting error is stressed at a certain multiple depending on the rating sought.

Where the tariff is recoverable from large industrial and commercial customers, Standard & Poor's will require data stratifying these customers by revenues generated. The cash flows will be additionally stressed to account for a potential loss in revenues caused by relocation of those customers with a high concentration risk in revenue generation for the utility.

Certain states have legislated rate caps on either the transaction charge for specific customer classes or on the total customer charge (i.e. through mandated rate reductions). Standard & Poor's will review the cash flow models to confirm that these rate caps are respected in stress scenarios.

Higher-Than-Expected Charge-Off Experience Like other forecasting variables, anticipated charge-offs are included in forecasting for purposes of setting the tariffs. Charge-offs may be higher than expected based on historical experience due to a variety of factors, including economic changes and unforeseen disasters. To account for this risk, charge-off history is stressed by the multiple relevant to the rating sought.

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Commingling by Aggregators The recent mandated unbundling of generation, transmission, and distribution charges has paved the way for alternative generation suppliers. The consumer may choose to purchase its generation services from an alternative supplier, while continuing to pay transmission and distribution (wires charge) to the utility. As discussed earlier, the tariff would be included in the wires charge, so that collection of the tariff itself would not be endangered by the existence of competition for generation services. However, commingling risk could exist as a result of potential billing arrangements for the utility's transmission and distribution services on the one hand, and the alternative energy provider's generation services on the other.

Generally, alternative energy service providers (retail electric providers; third-party servicers) may provide a consolidated bill for their generation services and the tariff owed to the utility. Where this is the case, the energy services provider is liable to pay the tariff regardless of whether it has received collections from the ultimate users. As a result, the securitization is exposed to commingling risk, and the resulting loss of commingled tariffs, in the event of the bankruptcy of an energy services provider.

This risk can be mitigated by certain restrictions on the length of time that an energy services provider may commingle funds before consolidated billing and service is terminated. If the energy services provider becomes delinquent, direct and consolidated billing may cease and service and separate billing to the end-user customer would be made up for the tariff. This means that the aggregator could commingle funds for a number of days before consolidated billing were terminated. To address this risk, Standard & Poor's stressed cash flow runs eliminate one month of collections per year at the utility's peak billing cycle.

This or other risks involving alternative energy providers may exist in other stranded cost securitizations. Standard & Poor's will assess these risks and the resulting necessary cash flow stresses on a case-by-case basis.

Estimate of Tariff Based on Collections Curve Generally, utilities are unable to allocate amounts received to various charges on the bill, so they were unable to calculate what percentage of collections constituted tariff collections. To address this problem, the utilities prepared forecasts of the percentages of amounts expected to be received during each of the following six months. These forecasts were based on collections curves developed periodically based on accounting studies and collections studies performed by the companies. For each monthly billing period, collections were estimated over six months based on the collections curve.

When the actual tariff remittances by customers are calculated (on the seventh month following each monthly billing period), either too much or too little may have been paid for that billing period. If the amount remitted has been less than the actual tariffs collected during that six-month period, the shortfall will be made up the following month out of the servicer's (the utility's) own funds. Thus, if the servicer is bankrupt (Standard & Poor's assumption), there is a risk the bondholders will lose that portion of the tariff. If the actual tariff amount has been less than the estimated tariff collections remitted to the trust, the servicer would be entitled to withhold the excess amount paid from the next month's remittances.

It is not clear whether this risk will be present in other securitizations. To date, the risk of lower-than-actual remittances has not been separately stressed in the cash flow runs. The one month of lost collections (see Commingling by Aggregators) has been sufficient to cover this risk. Standard & Poor's also has relied on data provided by the company showing relative lack of volatility in the collections curve.

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Higher Tariff An increase in tariff resulting from higher true-ups might become burdensome to consumers. This risk might have a spiraling effect, because greater charge-offs or customer migration or decreased usage might result, which in turn would result in the need for increased true-ups. Standard & Poor's will assess this risk by examining the highest per kWh tariff charge reached under the relevant stress scenarios. This risk increases as the term of the transaction increases to 10-15 years given greater technological/migration risk.

Cash Flows Two cash flow runs are generally required in rating stranded costs: a compounding forecast error run and an oscillating forecast error run, implementing the stress scenarios described below. These runs are created to test liquidity as well as the transaction's ability to meet the final maturity of each class of bonds in the transaction. They do so by creating scenarios where the true-up in the tariff amount (the reset of the tariff to reflect prior experience with actual collections and recover prior shortfalls in collections) continuously fails to reflect actual collections.

Compounding Forecast Error Run The compounding forecast error run assumes a compounding stressed error in forecasting resulting in a continual decline in actual tariff collections over what was forecast for that year. Assume, for example, that during year one, sales are 90% of the original sales forecast, that is, forecast error reflecting a multiple of the average forecast error for the customer class, where actual collections are less than expected collections.

At the end of year one, the tariff charge is recalculated assuming that year two customer sales will be what was experienced in year one, that is, 90% of the original expected forecast. Instead, year two sales are only 81% (90% of 90%) of the original sales forecast.

The sales decline is generally based on a multiple of the absolute value of the largest historical non-weather-normalized forecast variance by customer class. This compounding is assumed to continue from year to year over the life of the transaction.

Oscillating Forecast Error Run The oscillating forecast error run assumes a scenario where in one-year tariff collections exceed expectations, so that in the following year, the tariff is reset based on the prior year, only to experience a shortfall in actual collections. Assume for example that the appropriate stressed forecast error is 10%. During year one, sales are 90% (10% below) the original sales forecast. At the end of year one, the tariff is recalculated assuming that year two sales are also 90% of the original forecast. Instead, year two sales are 99% (110% of 90% level) of the original forecast. The tariff for the following year is reset assuming 99% of original forecast collections, only to receive 90% of originally forecast collections. This oscillation between 90% and 99% of original forecast is assumed to continue over the life of the transaction.

Legal Final Maturity The legal final maturity dates on stranded cost transactions are often set at up to two years beyond expected maturities. This additional period acknowledges the long-term nature of the liabilities being rated, and the corresponding possibility that fundamental changes in technology might take place that further stress the transaction in an unforeseen manner. One currently known possibility is that over time customers may increasingly switch to self-generation, which would enable them to cease paying the wires charge and thus, the tariff. Certain transactions have reduced this period by requiring more frequent (e.g. monthly) true-ups during the final year or two of the transaction.

Legal Risks

Reliance on Commission to Implement True-Up, and Potential Delay in Approving the True-Up Standard & Poor's believes that so long as the statute clearly specifies the maximum period before which the commission is compelled to implement the true-up, any shortfall in collections resulting from the delay can be sized and factored into the cash flow projections. Certain structures may permit the application of principal collections as liquidity for any interest payments due to noteholders during any true-up delay. In the absence of such features, adequate provision for liquidity and additional credit support should be demonstrated to Standard & Poor's.

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Adequate Provision Law permits alteration or limitation of right to transition property and right to collect tariffs if "adequate provision" is made to the bondholders. Although there has been no conclusive demonstration as to what constitutes "adequate provision," and how such alteration or limitation would affect timely interest and principal payments on the bonds, Standard & Poor's, in rated transactions, has received legal assurances that any such alteration would be constitutionally prohibited were it substantially to impair the security for the bonds. While such assurances do not really define adequate provision, Standard & Poor's believes, in practice, that adequate provision should prove to be the functional equivalent of the pledged transition property.

Stranded Assets to Aid Industry Restructuring

Securitization of stranded assets provides an efficient method electric utilities can use to quickly free themselves from the high cost of stranded assets that prevents them from becoming players in the emerging competitive retail generation market. At the same time, the statutory true-up mechanism provides strong credit support that has withstood 'AAA' stress criteria applied by Standard & Poor's.

Related Criteria

- Post-Default Ratings Methodology: When Does S&P Global Ratings Raise A Rating From 'D' Or 'SD'?, March 23, 2015
- U.S. Public Finance: Electric And Gas Utility Ratings, Dec. 16, 2014
- Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings, Oct. 24, 2013
- Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings, Oct. 1, 2012
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Version 3

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A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

A proposal to create Legislation.

Ontario's Fair Hydro Plan Act, 2017, if enacted

EXPLANATORY NOTE TO BE ADDED BY LEGISLATIVE COUNSEL
TO ANY FINAL BILL PRIOR TO INTRODUCTION.

[Insert explanatory note.]

[Notes re this draft:
- all numbering of provisions may need to be re-done
- will need to check all definitions to ensure (1) that they are needed; and (2) that they work properly wherever the term is used in the Bill.
- additional consequential amendments likely required still
- overall organization of provisions still TBC (for now just trying to get all of the elements drafted and will reconsider architecture later)
- need to check consistency of various phrases (e.g. *during/for/in respect of* reference period; *owner of RA/IA vs. RA/IA owner; etc.)*]

Preamble

The Government of Ontario is committed to fostering the development of a clean, modern and reliable electricity system with a diverse supply mix. The Government is also committed to removing barriers to and promoting opportunities for renewable and clean energy projects.[1]

The Government of Ontario has established a regulatory framework related to the generation and sale of electricity, which has promoted and continues to promote significant investment to enable phasing out of coal fired generation, modernizing sites and facilities in the Province for the generation of electrical energy and the production therefrom,[2] and conservation and demand management.

The Government of Ontario is committed to ensuring that the costs of these investments, and the raising of money to fund the investments,[3] are allocated fairly among present and future generations of consumers.

Therefore, Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

[1] Note: please see the preamble of the *Green Energy Act, 2009.*
[2] Note: please see clause 92A (4) (b) of the Constitution, 1867: "des emplacements et des installations de la province destinés à la production d'énergie électrique, ainsi que de cette production meme".
[3] Note: please see opening flush of s. 92A (4) of the Constitution Act, 1867

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PART I
GENERAL

Interpretation
Definitions

1xx. (1) In this Act,

"Board" means the Ontario Energy Board; ("French")

"clean energy adjustment" means the amount determined under section 10xx; ("French")
[Note - will need to check throughout the draft that references to CEA are clear as to whether it's the total CEA in respect of a reference period vs. the portion payable by a specified consumer.]

"clean energy benefits" means, in respect of a reference period, the value of the benefits determined to be derived by the specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected future incurrences of clean energy costs; ("French")

"clean energy costs" means, in respect of a reference period, the value of the costs allocated to specified consumers during the reference period as a result of the clean energy initiative, including as a result of past, present and expected costs incurred in respect of,

(a) the estimated costs to be incurred by the IESO under section 25.33 of the *Electricity Act, 1998* or any provision that is the successor to that provision, which relate to contracts for,

(i) renewable energy generation or capacity,

(ii) conservation and demand management, including storage,

(iii) energy efficiency,

(iv) natural gas generation and capacity, excluding contracts relating to amounts payable by the IESO under section 78.2 of the *Ontario Energy Board Act, 1998* and excluding such other contracts as may be prescribed, or

(v) payments made or expected to be made under section 78.5 of the *Ontario Energy Board Act, 1998*, and

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(b) such other estimated costs as may be prescribed; ("French")

"clean energy initiative" means the policies of the Government of Ontario related to,

(a) fostering the growth of and investment in clean and renewable energy sources and technologies,

(b) removing barriers to and promoting opportunities for clean and renewable energy sources and technologies, and

(c) promoting conservation and demand management; ("French")

"electricity vendor"[4] means the IESO, a licensed distributor, a licensed retailer or such other person as may be prescribed; ("French")

"fair adjustment" means the determination of the rate payable for electricity in accordance with Part II; ("French")

"Financial Services Manager" means Ontario Power Generation Inc. [or such other person or entity as may be appointed as the Financial Services Manager by the Minister under section **]; ("French")

"Financing Plan" means the plan prepared under section X, as amended from time to time in accordance with this Act; ("French")

"funding obligation" means a payment obligation incurred by or on behalf of the regulatory asset owner or an investment asset owner under section x; ("French")

"IESO" means the Independent Electricity System Operator continued under Part II of the *Electricity Act, 1998*; ("SIERE")

"IESO funding shortfall" means, in respect of a reference period, the amount determined under section 20xx for the reference period; ("French")

"investment asset" means the investment asset created as described in section 22xx; ("French")

"investment asset owner" means a financing entity that acquires an investment interest in the investment asset; ("French")

[4] Note - this is similar to the definition of "electricity vendor" in the Ontario Rebate for Electricity Consumers Act, 2016

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"investment interest" means an ownership interest in the investment asset, which entitles an investment asset owner to the rights and benefits specified in the agreement under which the ownership interest is transferred;

"invoice amount" means the amount, determined in accordance with subsections (2.1) and (2.2) and the regulations, that is payable by a specified consumer for the provision of electricity in Ontario during a period of time specified on an invoice issued by an electricity vendor; ("French")

"licensed distributor" means a person licensed under Part V of the *Ontario Energy Board Act, 1998* to own or operate a distribution system; ("French")

"licensed retailer" means a person who is licensed under Part V of the *Ontario Energy Board Act, 1998* to retail electricity; ("French")

"Minister" means the Minister of Energy or such other member of the Executive Council as may be assigned the administration of this Act under the *Executive Council Act*; ("ministre")

"prescribed" means prescribed by the regulations; ("prescrit")

"reference period" means,

(a) the period beginning on May 1, 2017 and ending on October 31, 2017,

(b) every six-month period following the period mentioned in clause (a) or such shorter period as may be set out in the Fair Allocation Plan; ("French")

"refinancing" means a repayment or repurchase of a funding obligation for cancellation by or on behalf of an investment asset owner by applying the net proceeds obtained by the owner incurring one or more other funding obligations; ("French")

"regulation" means a regulation made under this Act; ("règlement")

"regulatory asset" means the right established under section X to recover the IESO funding shortfall; ("French")

"representative consumer" means a consumer who meets the criteria set out in subsection (3); ("French")

"specified consumer" means,

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(a) a person who has an account with an electricity vendor for the supply of electricity, receives an invoice in respect of the account and meets the criteria set out in subsection (2); or

(b) such other person as may be prescribed; ("French")

"Toronto Hydro" means Toronto Hydro-Electric System Limited; ("French")

"transfer" means an assignment, conveyance, disposition or sale; ("French")

Specified consumers

(2) For the purposes of clause (a) of the definition of "specified consumer" in subsection (1), the person must meet any one of the following criteria:

1. The person has a demand for electricity of 50 kilowatts or less, or such other amount as may be prescribed.

2. The person annually uses not more than 250,000 kilowatt hours of electricity, or such other amount as may be prescribed.

3. The person carries on a business that is a farming business for the purposes of the *Farm Registration and Farm Organizations Funding Act, 1993* and either holds a valid registration number assigned under that Act or the has had the obligation to file a farming business registration form waived pursuant to an order made under subsection 22 (6) of that Act.

4. The person's account with the electricity vendor relates to,

    i. a dwelling,

    ii. a property within the meaning of the *Condominium Act, 1998*,

    iii. a residential complex within the meaning of subsection 2 (1) of the *Residential Tenancies Act, 2006*, without regard to section 5 of that Act, or

    iv. a property that includes one or more housing units and that is owned or leased by a co-operative within the meaning of the *Co-operative Corporations Act*.

5. The person satisfies such criteria as may be prescribed.

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Invoice amount

(2.1) Subject to subsection (2.2) and the regulations, the invoice amount for a specified consumer includes the following amounts:

1. In circumstances where the electricity is provided by a licensed distributor or a licensed retailer, the following:

    i. The commodity price of the electricity used during the invoice period.

    ii. The rates and charges set out in the applicable rate order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*.

    iii. Any adjustment on the invoice required under section 25.33 of the *Electricity Act, 1998*.

    iv. The amount of any harmonized sales tax payable [by the consumer?] under Part IX of the *Excise Tax Act* (Canada);

    v. Any other amounts as may be prescribed.

2. In circumstances where the electricity is provided by the IESO, such amounts as may be prescribed. ("French")

Same, exclusions

(2.2) Except as otherwise prescribed by the regulations, the invoice amount does not include any of the following amounts:

1. The balance of any amounts carried forward from previous invoices.

2. Penalties or interest.

3. Charges that do not relate to the use of electricity.

4. Any of the following charges that may be set out in an order issued by the Board under subsection 78 (3) of the *Ontario Energy Board Act, 1998*:

    i. A fixed monthly service charge payable by a generation facility within the meaning of section 56 of the *Ontario Energy Board Act, 1998* and classified as "microFIT".

    ii. A charge labelled as a "specific service charge" or "retail service charge".

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iii. A rate rider.

5. Any other prescribed amounts.

Representative consumer

(3) For the purposes of the definition of "representative consumer" in subsection (1), the consumer,

(a) purchases electricity directly from Toronto Hydro;

(b) has an account with Toronto Hydro that falls within a residential-rate classification as specified in a rate order made by the Board under section 78 of the *Ontario Energy Board Act, 1998*;

(c) is invoiced by Toronto Hydro on a monthly basis;

(d) is not invoiced by Toronto Hydro for electricity on an equal monthly payment plan or an equal billing plan; and

(e) uses, on average, 750 kilowatt hours of electricity each month.

Transfer

(4) For greater certainty, a transfer of the regulatory asset or a portion of the regulatory asset includes any act of the IESO by which the IESO purports to dispose of its interest in the regulatory asset with the result of a named person becoming the owner of an investment interest.

Effect of invalidity, etc.[5]

2xx. (1) For greater certainty, all of the provisions of this Act remain in full force and effect, even if some provisions are held to be invalid, the intention of the Legislature being to give separate and independent effect to the extent of its powers to every provision contained in this Act.

Same, funding obligation

(2) The fact that any provision of this Act is held to be invalid or ceases to be in effect for any reason does not affect a funding obligation that was incurred under this Act before the day that the provision was held to be invalid or ceased to be in effect.

Purpose

3xx. (1) The purposes of this Act are,[6]

[5] Note: this is from the *Climate Change Mitigation and Low-carbon Economy Act, 2016*

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(a) to ensure that clean energy costs are fairly allocated among specified consumers over time and that the process by which the Province raises money to fund the costs reflects the fair allocation; and

(b) to recognize that clean energy benefits that have accrued and that will accrue over time will continue to benefit present and future electricity consumers in the Province.

Crown bound

4xx. This Act binds the Crown.

Protection and assurances

Prohibition

5xx. (1) The Crown shall not do anything that would,

(a) hinder, delay, impair or prejudice the charging, collection or remittance of the clean energy adjustment;

(b) except as expressly permitted by this Act, reduce the amount of the clean energy adjustment or lower the priority of the clean energy adjustment over other debts; or

(c) adversely affect an investment asset or a funding obligation.

Clarification with respect to regulations

(2) For greater certainty, the things prohibited under subsection (1) include the making or approving of a regulation under this Act.

Agreements for compensation

(3) The Minister may, with the approval of the Lieutenant Governor in Council, enter into agreements on behalf of the Province of Ontario with any person in respect of this Act, including agreements regarding financial commitments, financial arrangements, indemnities or similar transactions.

PART II
FAIR ADJUSTMENT

[6] Note: Please see the *Electricity Act, 1998* for much of the wording proposed in this section.

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Fair adjustment, May 1, 2017 to April 30, 2018
Definition

6xx. (1) In this section,

"average baseline invoice amount" means the average monthly invoice amount that would be payable by a representative consumer under the average baseline rate; ("French")

"average baseline rate" means the average rate that would be payable effective May 1, 2017 by the class of consumers prescribed by the regulations under the *Ontario Energy Board Act, 1998* for the purposes of subsection 79.16 (1) of that Act, as determined by the Board by applying the method prescribed by the regulations under clause 79.16 (1) (b) of that Act; ("French")

"sub-meter customer" means a person who is supplied electricity by a specified consumer, if an invoice for the electricity is issued to the person by the specified consumer, by an agent of the specified consumer or by a unit sub-meter provider providing unit sub-metering for the specified consumer; ("French")

Rate determination

(2) Subject to subsection (3), [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] the rate for electricity payable by a specified consumer for the period beginning on May 1, 2017 and ending on April 30, 2018 is the average rate that would be payable by a representative consumer in order for the representative consumer to receive a monthly invoice amount that is 25 per cent less than the average baseline invoice amount.

Sub-meter customers

(3) A specified consumer who provides electricity to a sub-meter customer and any unit sub-meter provider who provides unit sub-metering for the specified consumer shall ensure that the rate payable by each sub-meter customer is the rate determined under subsection (2).

Determining rate

(4) The rate mentioned in subsection (2) shall be,

(a) determined by the Board within seven business days after this section receives Royal Assent; and

(b) effective as of the first day of the calendar month immediately following the determination.

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Transition

(5) If, for technical or operational reasons, an electricity vendor, specified consumer or unit sub-meter provider is unable to adapt its invoices to comply with this section by the time it issues its first invoice for electricity consumed on or after May 1, 2017,

(a) the electricity vendor, specified consumer or unit sub-meter provider shall adapt its invoices as soon as possible and, in any event, no later than [August 1, 2017]; and

(b) the electricity vendor, specified consumer or unit sub-meter provider shall ensure that any specified consumer or sub-meter customer invoiced at a rate higher than the applicable rate receives the difference between the rate shown on their invoice and the applicable rate as a lump sum credit on the first invoice issued after the invoices have been adapted or by such other means as may be prescribed by the regulations.

Fair adjustment, May 1, 2018 to April 30, 2022

7xx. The Lieutenant Governor in Council may, [to more fairly measure and allocate the clean energy costs and clean energy benefits among present and future generations of specified consumers,] make regulations prescribing the rate for electricity payable by specified consumers and sub-meter customers during the period beginning on May 1, 2018 and ending on April 30, 2022.

PART III
CLEAN ENERGY ADJUSTMENT

Specified consumers to pay clean energy adjustment

8xx. (1) Upon receipt of an invoice that includes a clean energy adjustment, a specified consumer shall pay the clean energy adjustment to the electricity vendor, as agent of the investment asset owners, in accordance with such terms of payment as may be specified in the invoice, which may include terms relating to late payment fees and interest charges.

Same

(2) For greater certainty, subsection (1) applies regardless of,

(a) whether the clean energy adjustment is inconsistent with the fair allocation calculation applicable at the time when the payment is due; and

(b) whether the clean energy adjustment relates to funding obligations that were incurred in a manner that was inconsistent with the Financing Plan.

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Indebtedness of specified consumer

(4) An unpaid clean energy adjustment that is required to be paid by a specified consumer under this section constitutes indebtedness of the consumer to each investment asset owner in respect of each owner's respective interest in the investment asset.

Same

(5) The indebtedness mentioned in subsection (4) is a single and separate debt obligation owed by the specified consumer and may be enforced independently from any other payment obligation or indebtedness owing by the specified consumer under the invoice or otherwise.

Irrevocability of clean energy adjustment

9xx. (1) The amount of the clean energy adjustment shown on an invoice issued to a specified consumer under this Act is determinative of the amount of the consumer's indebtedness created by the adjustment and is irrevocable upon invoicing the consumer and may not be set off or by passed.

Exception

(2) Subsection (1) does not apply to the extent that there is a calculation error by the electricity vendor.

Determination of clean energy adjustment

10xx. (1) The clean energy adjustment payable by all specified consumers in respect of a reference period shall be determined as follows:

1. Calculate the estimated finance amount for the reference period in accordance with Schedule 1 and such additional rules as may be prescribed.

2. Add the true up amount for the reference period, as determined in accordance with the prescribed method, to the estimated finance amount calculated under paragraph 1.

True up amount

(2) For the purposes of paragraph 2 of subsection (1), the Lieutenant Governor in Council may make regulations prescribing the method for determining the true up amount, having regard to the following principles:

1. The true up amount should serve to ensure that the collection of the clean energy adjustment is sufficient to pay the estimated finance amount when it is due.

2. The method for determining the true up amount should take into account historical and reasonably foreseeable,

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i. differences between amounts billed and amounts collected due to various factors, including applicable taxes, consumer defaults and delays, billing lags and write-offs, and

ii. variations in billings due to variations in electricity consumption.

IESO to issue remittance notice to electricity vendors

11xx. (1) The IESO shall, in accordance with the regulations, issue a remittance notice to each electricity vendor for the electricity vendor's portion, as determined in accordance with the regulations, of the clean energy adjustment in respect of a reference period.

IESO to collect

(2) The IESO shall, as an agent of the investment asset owners, collect the clean energy adjustment from electricity vendors [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Collection account

(3) All of the following amounts received by the IESO shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be deposited promptly into an account established for the purposes of collecting those accounts:

1. Amounts described in subsection 12 (4).

2. Payments made by specified consumers directly to the IESO as electricity vendor under subsection 8 (1).

Same, held in trust

(4) All amounts received by the IESO in respect of the clean energy adjustment shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (6), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act.

IESO to remit

(5) The IESO shall remit amounts received by it in respect of the clean energy adjustment to or for the benefit of the investment asset owners in accordance with the regulations.

Collection of outstanding amounts, regulatory asset

(6) If the total clean energy adjustment payable by specified consumers in respect of a reference period is less than the amount contemplated to be payable under the

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applicable fair allocation calculation made by the Financial Services Manager under Part IV, the IESO may collect the difference from specified consumers.

Electricity vendor to invoice specified consumers

12xx. (1) The electricity vendor shall issue an invoice to each specified consumer for the consumer's amount of the clean energy adjustment in accordance with the regulations.

Electricity vendor to collect

(2) Each electricity vendor shall, as an agent of the IESO and the investment asset owners, collect the clean energy adjustment from specified consumers [in accordance with the monthly settlement process set out in the market rules made under section 32 of the *Electricity Act, 1998]*.

Pro rating of payments

(3) If an electricity vendor receives a payment made by or on behalf of a specified consumer in respect of amounts payable under one or more invoices and the amount paid is less than the total amount payable, the electricity vendor shall allocate the payment on a pro rata basis to the clean energy adjustment and other amounts payable under the relevant invoices in respect of electricity charges for the same invoice period.

Held in trust

(4) All of the following amounts received by an electricity vendor shall, until paid to or for the benefit of the investment asset owner in accordance with subsection (5), be held in trust for the investment asset owners or a secured party to whom a security interest in an investment interest is granted under this Act:

1. Payments received from or on behalf of specified consumers under subsection 8 (1).

2. Portions of payments received from or on behalf of specified consumers under subsection 8 (1) that are allocated to the clean energy adjustment under subsection (3).

3. Any proceeds arising from the exercise and enforcement of any rights and interests under or in respect of the investment asset.

Remittance to IESO

(5) Each electricity vendor other than the IESO shall remit amounts described in subsection (5) to the IESO for the benefit of the investment asset owners or secured parties in accordance with the regulations.

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Regulations

(6) If an electricity vendor fails, in the manner described in the regulations, to comply with the requirements of this section, the electricity vendor shall take such steps as the regulations may prescribe.

PART IV
IMPLEMENTATION

FINANCIAL SERVICES MANAGER

Appointment

13xx. (1) [Note: To be elaborated.]

Termination

(2) The Minister may by written order terminate the appointment of an appointee as the Financial Services Manager if,

(a) the Minister has advised the appointee that the Financing Plan is either inconsistent with or is being implemented in a manner that is inconsistent with the principles set out in section x;

(b) the appointee has been afforded a reasonable opportunity to consider and address the inconsistency; and

(c) the appointee is unwilling or unable to address the inconsistency to the satisfaction of the Minister.

Replacement

(3) Upon terminating an appointment, the Minister may, in accordance with the regulations, appoint a new person or entity as the Financial Services Manager.

Duties and powers

14xx. (1) The Financial Services Manager shall perform the duties assigned to it under this Act and may administer the investment asset on behalf of the investment asset owner.

Same

(2) The administration of the investment asset may include the following:

1. Providing information, in accordance with the regulations, to the Board in respect of funding obligations and the determination of the clean energy adjustment in accordance with section XX.

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2. Providing information to electricity vendors, including the IESO, in respect of obligations under Part III.

3. Such other matters as may be prescribed.

Review of costs

(3) The Board shall review the administrative costs of the Financial Services Manager in accordance with the regulations.

FAIR ALLOCATION AMOUNT

Financial Services Manager to calculate fair allocation amount

15xx. (1) The Financial Services Manager shall calculate the fair allocation amount for the purposes of,

(a) fairly measuring and allocating the estimated clean energy costs and estimated clean energy benefits among the specified consumers in respect of each reference period; and

(b) aligning funding obligations that may be incurred during each reference period with the allocation of the estimated clean energy costs and estimated clean energy benefits across present and future generations of specified consumers.

Amount

(1.1) The fair allocation amount in respect of a reference period is the sum of the following amounts:

1. The amount, if any, by which the estimated [clean energy costs] [clean energy benefits] to be allocated to specified consumers in respect of the reference period exceeds the estimated amount of [the global adjustment] that would be borne by the specified consumers in respect of clean energy costs [in the absence of this Act].

2. An allocable portion of the value of any fair adjustment, determined in accordance with subsection (3).

Principles

(2) In calculating the fair allocation amount [or in developing the fair allocation calculation?], subject to subsection (3), the Financial Services Manager shall have regard to the following principles:

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1. Clean energy costs allocated to the specified consumers in respect of a reference period should be allocated in proportion to the clean energy benefits attributed to the specified consumers in respect of the reference period.

2. The clean energy benefits attributed to the specified consumers in respect of a reference period should be determined based on *[Insert principles]*.

3. The fair allocation calculation should include reasonable assumptions regarding the following:

    i. The time value of money or the rate of inflation, for the purpose of equating nominal amounts over time.

    ii. The expected number of specified consumers for each reference period.

    iii. The expected electricity consumption rates for each reference period.

Allocation of fair adjustment

(3) If, before the Financial Services Manager has calculated the fair allocation amount in respect of a reference period, a fair adjustment has been made under Part II in respect of the reference period, the calculation shall include a portion of the value of the fair adjustment in the fair allocation calculation for each future reference period.

Amendments to the fair allocation calculation

(4) The Financial Services Manager may amend the fair allocation calculation from time to time, as the Financial Services Manager considers appropriate, having regard to the requirements of this Act.

Submission of fair allocation to Minister

(5) The Financial Services Manager shall provide to the Minister the fair allocation calculation and any amendments to the fair allocation calculation.

Effective date

(6) The fair allocation calculation or an amendment to the fair allocation calculation takes effect on the day that is 30 days after the fair allocation calculation or the amendment, as the case may be, is provided to the Minister in writing.

Publication

(7) The Minister shall ensure that the fair allocation calculation and any amendments to it are made available to the public in a manner that the Minister considers appropriate.

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FINANCING PLAN

Financial Services Manager to prepare Financing Plan

16xx. (1) The Financial Services Manager shall prepare and provide to the Minister a written plan entitled the Financing Plan to be used by the Financial Services Manager to evaluate whether potential funding obligations should be incurred or potential transfers should be made for the purposes of this Act.

Principles

(2) In preparing the Financing Plan, the Financial Services Manager shall have regard to the following principles:

1. Any incurrence of a funding obligation should reasonably align the expected finance amount determined under Schedule 1 that would become due and payable during a reference period with the fair allocation amount determined for the reference period under this Part as of the time of the incurrence, in each case after reducing the fair allocation calculation by the amount of any fair adjustment for the reference period.

2. Incurrences and transfers should be implemented in a manner that, as the Financial Services Manager considers to be reasonable, is cost effective and reflects prevailing market terms and conditions.

3. Reasonable assumptions should be made regarding such matters as may be prescribed.

[Note for reference: List of items for consideration in regulation: (a) anticipated IESO funding shortfalls and related transfer amounts; (b) the maturities of funding obligations; (c) the availability of refinancings, redemption opportunities and liquidity terms and conditions in order to achieve the objective contemplated in section X(1)(a); (d) the availability of currency and interest rate hedging facilities for the purpose of mitigating any differences between the expected finance amounts becoming due and payable during a reference period and the fair allocation amount for the reference period; (d) the amount and potential variability of interest rates and related financing costs; (e) available capital markets in which funding obligations may be incurred.]

Amendments to approved plan

(3) The Financial Services Manager may amend the Financing Plan at any time, without the approval of the Minister, subject to the requirements set out in this section.

Limitation, first five year period

(4) In respect of each reference period from May 1, 2017 to April 30, 2022, no funding obligation shall be incurred that would become payable during the reference period and result in a clean energy adjustment for the reference period unless,

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(a) no fair adjustment has been made under Part II in respect of the reference period; or

(b) if a fair adjustment has been made under Part II in respect of the reference period, the funding obligations incurred would not be payable during the reference period in an amount that exceeds the [difference between the fair allocation amount for the reference period and the amount of the fair adjustment for the reference period].

Confidentiality of plan

(4) The Financing Plan is deemed to be a record subject to section 17 of the *Freedom of Information and Protection of Privacy Act.*

Implementation of Financing Plan

17xx. (1) The Financial Services Manager shall incur funding obligations and make transfers in material conformity with the applicable Financing Plan.

Same

(2) For greater certainty, section [paramountcy of funding obligations] applies despite the failure of the Financial Services Manager to comply with subsection (1).

Financing entities

(3) In accordance with the Financing Plan, the Financial Services Manager may establish one or more financing entities that may incur funding obligations and make transfers.

Prohibition

(3) The Financial Services Manager shall not provide for funding obligations to be incurred with any recourse to any assets of an electricity vendor, the Board, the Province or the Lieutenant Governor in Council, except to the extent that any of these persons or entities may be liable to perform obligations or duties arising under this Act or under the express terms of a funding obligation.

Effect of amendment to Fair Allocation Plan

(4) No funding obligation incurred and no transfer made by the Financial Services Manager shall be affected by any inconsistency with the Financing Plan, including any inconsistency with the principles set out in section X.

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PART V
THE REGULATORY ASSET

Interpretation, portion of regulatory asset

18xx. If a transfer under this Part provides for the transfer of a portion of the regulatory asset, any references in this Part to the regulatory asset are deemed to be references to the portion of the regulatory asset transferred.

[Note: This is meant to assist with clarity in the subsequent provisions.]

Variance account

19xx. (1) The Board shall issue an accounting order to authorize the IESO to do the following:

1. Create a variance account for the purposes of this Act.

2. Record the IESO funding shortfall in the variance account from time to time.

3. Recover the IESO funding shortfall in accordance with section X and the regulations.

No hearing

(2) The order of the Board shall be made in writing and without holding a hearing.

No appeals, etc.

(3) No appeal lies from the order of the Board.

IESO funding shortfall

20xx. (1) The IESO shall determine the IESO funding shortfall for each month in the following manner:

1. Calculate the sum of all invoice amounts issued to specified consumers for the month if Part II of this Act did not apply.

2. Calculate the sum of all invoice amounts issued to specified consumers for the month.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1, and make any other adjustments as may be prescribed.

Same

(2) To the extent that the IESO funding shortfall for any month is based on an estimate of the electricity used by specified consumers, the IESO shall record an

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adjustment in the variance account in the following month to reflect the difference between the estimate and the electricity actually used by specified consumers.

Recording of IESO funding shortfall

(3) IESO shall record the IESO funding shortfall from time to time, including adjustments resulting from the exercise of the right of recovery under section 21 and any transfer under section 22, in the variance account.

Recording determinative

(4) A recording of the IESO funding shortfall in the variance account is determinative of the amount of IESO funding shortfall at the time of the recording.

Regulatory asset established

21xx. (1) The IESO has the right, exercisable in accordance with this Act and the regulations, to recover the IESO funding shortfall.

Same, restrictions

(2) The IESO's right to recover the IESO funding shortfall under subsection (1) is subject to the following:

1. The IESO shall not be entitled to collect the IESO funding shortfall from specified consumers before May 1, 2022.

2. The process by which the IESO may recover the IESO funding shortfall shall be established by the Board, having regard to the amount of the IESO funding shortfall from time to time and the [fair allocation calculation].

3. Such other restrictions as may be prescribed.

Transfer of regulatory asset

22xx. (1) The IESO may transfer all or a portion of the regulatory asset to any financing entity under the Financing Plan, which transfer creates the investment asset.

Same

(2) Upon receipt of any payment in consideration for the transfer,

(a) the IESO shall record the payment as a reduction of the IESO funding shortfall in the variance account; and

(b) unless otherwise provided for in this Act, the IESO shall have no further right, title or interest in, or any obligations in respect of, the regulatory asset or in the investment asset created by the transfer.

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Same

(3) Upon transfer, the financing entity becomes an investment asset owner and acquires an investment interest.

Validity of transfer

23xx. (1) A transfer of a regulatory asset under this Act is a valid and enforceable sale and absolute transfer to the investment asset owner of the regulatory asset, and the investment asset created by the transfer shall be immediately vested in the transferee.

Same

(2) Without limiting subsection (1), any transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of IESO's right to recover the IESO funding shortfall, and not merely as a security interest, and upon the absolute transfer the transferor shall retain no right, title or interest in the regulatory asset, including all rights to recover the IESO funding shortfall.

Deemed perfection, etc.

(3) At the time a transfer of a regulatory asset is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the transferee shall have priority over any liens in favour of those persons.

PART VI
THE INVESTMENT ASSET

Interpretation, investment asset

24xx. If a transfer under this Part provides for the transfer of an investment asset, any references in this Part to the investment interest are deemed to be references to the specific investment interest transferred.

Investment asset established

25xx. (1) The investment asset constitutes a current and irrevocable property right and interest consisting, collectively, of the following rights and interests without duplication:

1. The right to impose, bill, invoice, collect and receive the clean energy adjustment from specified consumers, including the right to determine the amount of the clean energy adjustment in accordance with this Act.

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2. The right to receive and collect all amounts in respect of the clean energy adjustment that are imposed, billed and invoiced under this Act, including any amounts that all amounts in respect of the clean energy adjustment that are held by electricity vendors or other prescribed parties.

3. All rights and entitlements under such accounts as may be prescribed by regulation and all amounts on deposit in such accounts.

4. The right to enforce the duties and obligations under this Act of each electricity vendor to impose, attribute, charge, bill and invoice the clean energy adjustment.

5. The right to enforce the duties and obligations under this Act of each electricity vendor to collect, receive and remit amounts received by it in respect of the clean energy adjustment, including all collections and the proceeds of any enforcement action undertaken by an electricity vendor to recover payment of the clean energy adjustment.

6. All rights of any kind (whether in tort, contract or otherwise) that attach or are attendant or incidental to any of the other property rights or interests that comprise the regulatory asset owner's regulatory asset.

7. All revenue, collections, claims, payments, money and proceeds of or derived from the rights described in paragraphs 1 to 6, regardless of whether such revenue, collections, claims, payments and proceeds are imposed, invoiced, collected and maintained together with or commingled with other revenue, collections, claims, payments, money and proceeds.

No set off, etc.

(2) The investment asset shall not be set off or reduced by any person in any circumstance, including,

(a) by a consumer, an electricity vendor, an agent of the investment asset owner or an owner of distribution system assets in the Province;

(b) in connection with any default, bankruptcy, reorganization or other insolvency proceeding of a person mentioned in clause (a); or

(c) by any affiliate or successor of a person mentioned in clause (a).

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Exercise of rights

(3) The rights of the investment asset owner to collect and enforce its rights and interests in, to and in respect of the investment asset against a specified consumer shall be exercised in accordance with section [xx] of the *Personal Property Security Act*.

Collective action required

(4) If the investment asset owner owns a right or interest in the investment asset that comprises less than the entire property right and interest constituted by the investment asset, the right or interest shall only be enforced by the investment asset owner collectively and in coordination with all other investment asset owners, and any agreement among that collective in furtherance of the collective action shall be valid and binding on the investment asset owner as a collective in accordance with its terms. [Note: Successors may need to be addressed here.]

Transfer of investment interest

26xx. An investment asset owner may transfer all or a portion of its rights and interests in an investment interest to any other investment asset owner, including by way of a transfer of a divided or an undivided interest, in accordance with the Financing Plan.

Validity of transfer

27xx. (1) A transfer of an investment interest under this Act is a valid and enforceable sale and absolute transfer of the investment interest and confers upon the owner of the investment interest acquired a valid property right and interest in, to and under the applicable investment interest in accordance with the terms of the transfer.

Same

(2) Without limiting subsection (1), a transfer that by its terms is intended to constitute a sale or absolute transfer shall be treated for all purposes as an absolute transfer of an investment asset owner's right, title and interest in, to and under an investment interest, and not merely as a security interest, and upon such absolute transfer the transferor shall retain no right, title or interest in the investment interest, subject to the transfer, including all rights to the investment interest arising after the transfer.

Deemed perfection, etc.

(3) At the time a transfer of an investment interest is made, the transfer shall be deemed to have been and shall be perfected, vested, valid and binding as against the transferor and all other persons who have claims of any kind against the transferor.

Priority of transfer, assignment, etc.

(4) Subsection (3) applies regardless of whether the persons who have claims have received notice of the transfer and the property rights and interests acquired by the investment asset owner shall have priority over any liens in favour of such other persons.

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Investment asset owner may grant security interest

28xx. (1) An investment asset owner may grant a security interest over all or a specified portion of its right, title and interest in, to and under the investment interest to or in favour of any person to secure a funding obligation.

Validity

(2) A security interest granted under this Act shall be valid and enforceable in accordance with its terms.

Perfection and priority of security interests

(3) All provisions of the *Personal Property Security Act* shall apply to the investment asset and each investment interest on the basis that it is intangible personal property, except as otherwise provided for in this section, and any granting of a security interest by the owner of an investment interest to secure a funding obligation shall, subject to the terms of the funding obligation, give rise to a security interest in respect of which that Act applies and may be perfected by filing a financing statement under that Act on that basis.

Proceeds

(4) All proceeds of an investment interest that are subject to the security interest and that are received by the applicable investment asset owner shall immediately be subject to the security interest and shall be perfected without any physical delivery of the proceeds, registration of any financing statement or any further act.

Perfection

(5) The security interest shall be a continuously perfected security interest and shall have priority over any other lien, created by operation of law or otherwise, that may subsequently attach to the property rights and interests in the investment interest subject to the security interest, subject to the written consent of the person to whom the security interest has been granted.

Same

(6) The person to whom the security interest has been granted shall have a perfected security interest in revenues or other proceeds that are deposited in any [investment asset account] or other account of any electricity vendor, the IESO, an agent of an electricity vendor or the IESO or other person who may have commingled such revenues or other proceeds with other funds.

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PART VI
MISCELLANEOUS

Appointment of agent, invoicing or collection

29xx. If a prescribed circumstance applies, the Lieutenant Governor in Council may by regulation appoint a person to carry out some or all of the obligations of an electricity vendor under this Act in the place of an electricity vendor with respect to invoicing or collection.

Not Crown agent

30xx. For greater certainty, no agent appointed under this Act is an agent of the Crown for any purpose, despite the *Crown Agency Act*.

Sequestration

31xx. (1) A court in the Province may, upon application by an investment asset owner or a secured party, order the sequestration and payment of the clean energy adjustment, collections and remittances, as applicable, for the benefit of the investment asset owner or secured party by any person or entity authorized to collect the clean energy adjustment, defaults on any required remittance of the clean energy adjustment, collections or remittances.

Same

(2) An order under subsection (1) does not limit any other remedies available to the applicant.

Same

(3) An order under subsection (1) shall remain in full force and effect despite any bankruptcy, reorganization or other insolvency proceedings with respect to the person or entity who is subject to the order.

Choice of law

32xx. The law governing, as applicable, the validity, enforceability, attachment, perfection, priority and exercise of remedies with respect to the transfer of an interest or right or creation of a security interest in the regulatory asset, the investment asset, the clean energy adjustment or the undertaking of the Crown under section x shall be the laws of the Province.

Conflict

33xx. The provisions of this Act and the regulations apply despite any provision of any other Act regarding the attachment, assignment or perfection, or the effect of perfection or priority of any transfer or security interest.

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No further approvals, etc.

34xx. Despite any requirement under any Act, no approvals, notices or authorizations other than those specified in this Act are required with respect to the actions to be taken in compliance with this Act, including actions to be taken under the Financing Plan or in relation to the establishment of the Fair Allocation Plan.

Immunity

35xx. (1) No action or other proceeding for damages shall be instituted against any employee of the Province, IESO, OPG or OEB for any act done in good faith in the execution or intended execution of any duty or authority under this Act or for any alleged neglect or default in the execution in good faith of any duty or authority under this Act.

Same

(2) Despite subsections 5 (2) and (4) of the *Proceedings Against the Crown Act*, subsection (1) does not relieve the Crown of liability in respect of a tort committed by a person mentioned in subsection (1) to which it would otherwise be subject.

References in marketing materials and offering documents

36xx. No person shall include, in marketing materials or offering documents relating to the financing of funding obligations, references to any rights, obligations, guarantees or undertakings arising under this section unless the prescribed requirements, if any, are satisfied.

Non-application, Financial Administration Act, s. 28[7]

37xx. Section 28 of the *Financial Administration Act* does not apply with respect to any transaction or agreement or undertaking required, permitted, contemplated or authorized, directly or indirectly, under this Act.

Regulations

38xx. The Lieutenant Governor in Council may make regulations,

(a) defining any term used in this Act….

(b) prescribing types of payment obligations that constitute funding obligations;

(a) governing the calculation [true-up amount] and how the amount is to be applied to the clean energy adjustment.

(b) governing the inclusion of adjustments under this Act on invoices, which may include requiring notice to be provided by electricity vendors to specified persons regarding the adjustments.

[7] Note - see s. 51 of the Electricity Act, 1998

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[Note: reg-making powers to be dealt with in subsequent draft]

PART VII
AMENDMENTS TO OTHER ACTS

ELECTRICITY ACT, 1998

200x. (1) Subsection 6 (1) of the *Electricity Act, 1998* would be amended by adding the following clauses:

(q.0.1) to exercise the powers and rights and to perform the duties and obligations assigned to it under the *Ontario Fair Hydro Plan Act, 2017* and to engage in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including,

(i) entering into agreements or arrangements with any person for the purposes of the *Ontario Fair Hydro Plan Act, 2017*;

(ii) engaging in activities related to making payments to and receiving payments as contemplated under the *Ontario Fair Hydro Plan Act, 2017* and to engage in related settlement activities;

(iii) engaging in activities related to the creation, transfer and administration of the regulatory asset created under the *Ontario Fair Hydro Plan Act, 2017*, which activities may include,

(iv) incurring liabilities in relation to the regulatory asset

(v) transferring the regulatory asset for consideration;

(vi) acting as a recovery agent under the *Ontario Fair Hydro Plan Act, 2017*;

201x. Section 53.1 of the Act would be amended by adding the following subsections:

Same, *Ontario Fair Hydro Plan Act, 2017*

53.1 (1.1) In addition to the objects mentioned in subsection (1), the objects of Ontario Power Generation Inc. include exercising the powers and rights and performing the duties and obligations assigned to it under that Act and engaging in activities to facilitate the implementation of the *Ontario Fair Hydro Plan Act, 2017*, including the following:

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1. Entering into contracts and undertakings on behalf of special purpose financing entities, including pre-formation contracts and undertakings and as principal in relation to matters permitted by the *Ontario Fair Hydro Plan Act, 2017* subject to the right of reimbursement from amounts available to the financing entity.

2. Preparing reports on behalf of the financing entity.

3. Enforcing the rights of the financing entity.

4. Signing offering documents as sponsor or otherwise on behalf of the financing entity.

5. Exercising the powers and performing the duties of the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*

6. Issuing non-equity securities in Ontario Power Generation Inc. or on if its subsidiaries, for the purpose of raising funds to acquire debt or equity interests in a financing entity whose activities are limited to the incurrence of funding obligations pursuant to the *Ontario Fair Hydro Plan Act, 2017*.

Subsidiaries, etc.

(1.2) Ontario Power Generation Inc. may create one or more subsidiaries, trusts or special purpose entities in order to more efficiently conduct its activities or achieve its objects.

202x. Section 89 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

203x. Section 90 of the Act would be amended by adding the following subsection:

Exception

(4) The requirement in subsection (1) to pay an amount to the Financial Corporation does not apply in respect of amounts payable to Ontario Power Generation Inc. or a subsidiary of Ontario Power Generation Inc. as a result of its functions as the Financial Services Manager under the *Ontario Fair Hydro Plan Act, 2017*.

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[Note: Drafting still to be added to the EA consequential amendments: ***All fees charged by OPG as the FSM shall be approved by the OEB before they are included in the calculation of clean energy adjustments.]***

AMENDMENTS TO ONTARIO ENERGY BOARD ACT, 1998

204x. Subsection 1 (1) of the *Ontario Energy Board Act, 1998* would be amended by adding the following paragraph:

6. To facilitate the implementation of the [TBD - language should link up with language from new Act.]

205x. Section 70 of the Act would be amended by adding the following subsection

[Note - still need to draft new subs. 70 (2.1)]

Short Title - this proposal for legislation would, if approved by the Legislature, have a short title to be determined by Government.

Timing – this proposal for legislation would, if approved by the Legislature, come into force on a date to be established by Government.

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SCHEDULE 1
ESTIMATED FINANCE AMOUNT

Estimated finance amount

1. The estimated finance amount for a reference period shall be determined by estimating, prior to the start of a reference period, the sum of the following:

1. The sum of all amounts that are payable during the reference period by or on behalf of the investment asset owners to satisfy an obligation to repay, redeem or repurchase, or to provide for the repayment, redemption or repurchase, of all or a portion of the amount advanced to the owners under a funding obligation, excluding any payment made by applying the proceeds of a refinancing.

2. The sum of all funding costs for the reference period, determined as follows:

    i. Calculate the aggregate of all interest, scheduled principal and other periodic finance charges accruing, due and becoming payable or paid by or on behalf of investment assets owners during the reference period in respect of all funding obligations, including such amounts as may be prescribed.

    ii. Calculate the sum of the aggregate of all amounts received by or on behalf of investment asset owners during the reference period in respect of all funding obligations and such other amounts as may be prescribed.

    iii. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

3. The sum of all amounts payable during the reference period by or on behalf of investment asset owners to redeem, prepay or repurchase a funding obligation, including any premium, make-whole or other amount becoming payable under a funding obligation to give effect to the redemption, prepayment or repurchase.

4. The balance of the finance reserve at the end of the reference period, as determined under section 3 to this Schedule.

5. The sum of any other amounts payable during the reference period by or on behalf of investment asset owners that were incurred or committed to directly or indirectly in connection with the incurrence of funding obligations under the Financing Plan during the reference period, which may include such amounts as may be prescribed.

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Funding costs

2. For the purposes of paragraph 2 of section 1 to this Schedule, the funding costs for a reference period are determined by taking the following steps:

Finance reserve balance

3. (1) For the purposes of paragraph 4 of section 1 to this Schedule, the balance of the finance reserve at the end of the reference period is determined by taking the following steps:

1. Calculate the sum of all amounts deposited by or on behalf of investment asset owners during the reference period in order to pre-fund, collateralize, over-collateralize or establish reserves for the ultimate payment of funding obligations or for related contingencies specified in the Financing Plan.

2. Calculate the sum of all amounts withdrawn by or on behalf of investment asset owners during the reference period from deposits previously made as described in paragraph 1.

3. Subtract the amount calculated under paragraph 2 from the amount calculated under paragraph 1.

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From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning; Ronald Kwan
Cc:	Anna Strathy
Subject:	Fw: Guarantee
Date:	Friday, April 21, 2017 2:40:35 PM
Attachments:	Guarantees.docx

I don't think the original email I sent to you had this attachment.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:33 PM
To: Gadi Mayman; anna.strathy@ofina.ca
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF)
Subject: FW: Guarantee

Hi Gadi, Anna,
We had a call with Carolyn Calwell and Paul Johnson at Energy Legal.
Please find attached a summary description of the guarantee for a number of obligations related to the proposed transaction that is being requested by OPG's investment dealers. There are 2 guarantees being requested: a guarantee of payment in certain situations as well as a performance guarantee. Although the Province has provided payment guarantees in the past, I am not aware of the Province provided guarantees of performance so this would be a new type of guarantee. We understand that these guarantees would have to be authorized by the proposed legislation so the wording of the authorizing sections needs to be worked on. Right now the section is very general and doesn't yet include the word "guarantee". Also there should be some wording around the type or scope of the guarantee or what it is in relation to. As well, I am assuming that payment under the guarantee would have to be a charge on the CRF in order to provide sufficient support. I am not sure whether the Province's liability under these guarantees can be capped. Also I understand there is a section in the proposed legislation indicating s. 28 FAA does not apply so this is something for us to consider too.
I understand that Tory's (OPG's counsel) is working on a first draft of the guarantee, but it does not appear that the scope of the guarantee would be settled before legislation is introduced.
I don't' know if you have seen the attached document previously. Who would you like us to speak to at the OFA about this proposal?
Thanks.
Malle
Malle Hanslep
Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
Notice: This communication may be solicitor/client privileged and contain confidential information intended only for the person(s) to whom it is addressed. If you have received this message in error please notify the writer and permanently delete the message and all attachments. Thank you.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 12:49 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle, can we give you a call around 1:30? In the meantime, I attach a summary prepared by the investment dealers (CIBC, Goldman) advising OPG of the types of guarantees that they are expecting to see as part of this proposal.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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There are two types of "guarantees" that we are looking for from the Province in relation to this program on the basis that any debt issued under the Fair Hydro Program will be AAA-rated. The following is based on the understanding that charges collected from prescribed consumers will be subject to a moratorium during the first 5 years of the program which results in interest and other on-going expenses of the financing entity not being recovered from ratepayers during this initial 5 year period.

The legislation must include a specific reference to the Province being required to provide a guarantee on debt repayment and servicing in certain circumstances.

The first is a "Springing Guarantee", which would be via a legal agreement put in place when establishing the program and would require the Province to step in and assume responsibility for paying all amounts that are or become due in respect of (i) any of the outstanding funding obligations; (ii) the operation and maintenance of the financing entity; and (iii) any other amounts due in relation to the program that have not yet been paid (collectively, the "Fair Hydro Program Costs"). This Springing Guarantee would kick in should any of the following happen:

(1) There is any change in the legislation or regulations that is, or could be, adverse to finance entity noteholders or the legislation is determined to be *ultra vires*. In this situation, the Springing Guarantee would require the immediate repayment of all Fair Hydro Program Costs (including any makewhole prepayment obligations).

(2) There is a market disruption (i.e. there is a period of time when capital markets term funding is not available to take out the warehouse facilities (bank facility or ABCP)). In this situation, either (i) we must have the ability to recover amounts relating to principal recoveries by invoicing and collecting clean energy adjustments, regardless of whether this is during the first 5 or 10 years of the program; or (ii) the Province must be responsible for the immediate repayment of those warehouse facilities. In respect of clause (2)(i), those clean energy adjustments could either be passed on to the ratepayers, or be funded by an incremental IESO shortfall or servicer advance (which in turn, could be funded by the Province).

The period of time that must lapse before this Springing Guarantee becomes applicable with respect to the warehouse facilities can be set to accommodate a short term dislocation in the term funding market (6-18 months). We would note that depending on the size of the warehouse facility, if there is no term takeout for an extended period of time, it is likely that the warehouse facilities will also quickly reach their credit limits and the province would likely have to fund any future shortfalls if they wished to continue the program.

To the extent that the Springing Guarantee does not require the Province to make the repayment contemplated under scenario (1), but simply requires the Province to repay the debt in accordance with its original repayment terms, this may adversely impact the rating of the Fair Hydro Program.

The second type of guarantee we are looking for from the Province is a performance guarantee. This is not a credit guarantee. The performance guarantee would require the Province to stand behind certain of the servicing obligations in the program. Typically, if there is a situation where a servicer does not perform all of the duties themselves, but delegates some of

their activities to a sub-servicer or agent, the servicer would retain responsibility for duties performed by those delegates. Our understanding is that IESO will only be acting as agent in this transaction, so this standard will not be in place with respect to IESO or the LDC's. To address this risk, we would be looking for a performance guarantee to be included as part of the documents for the program which would cover any of the servicing and collection activities, regardless of whether those were performed by IESO, as initial servicer, a replacement servicer or an LDC. The performance guarantee would, amongst other things, require the Province to stand behind (including taking responsibility for helping remedy any breaches in) the representations, warranties and covenants made be the servicer and the servicer's or LDCs' obligations to collect and remit clean energy adjustments. It would also require the Province to ensure that the servicer and, if applicable, LDC, performs their servicing activities as set out in the securitization documents and if they do not, put in place an alternative servicer who would perform those servicing activities. Subject to confirmation with the rating agencies, the performance guarantee should also address commingling risk during each month. Typically, as long as the performance guarantor maintains an acceptable rating (at or slightly above investment grade), cash collections should be permitted to be commingled each month until remitted to the Financing Entity with the Province taking responsibility for the commingling risk (i.e. the Province would be required to remit if there were amounts collected and commingled, but not received by the Financing Entity). Our understanding is that the LDCs will be performing certain servicing and collection activities which we would describe in the legal agreements, but we are not expecting the LDCs be parties to the agreements themselves. The performance guarantee would need to cover activities performed by the LDCs, as well as the servicer, including any cash collected but not remitted to the Financing Entity. The performance guarantee would also include the Province standing behind any other potential liabilities arising from the performance of such servicing obligations by the parties involved in servicing these investment assets on behalf of the Financing Entity.

From: Gadi Mayman
To: Ronald Kwan; Mike Manning; Ken Kandeepan
Cc: Anna Strathy; Gavin He
Subject: Fw: Minister Letter to OPG
Date: Tuesday, April 18, 2017 11:04:17 AM
Attachments: MC-2017-750 Outgoing.pdf

From: Nelms, Scott (MOF)
Sent: Tuesday, April 18, 2017 11:02 AM
To: Gadi Mayman
Subject: FW: Minister Letter to OPG

From: Katona, Keley (ENERGY)
Sent: April 13, 2017 5:42 PM
To: Hume, Steen (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF)
Subject: Fw: Minister Letter to OPG

From: Keley.Katona@ontario.ca
Sent: Thursday, April 13, 2017 5:41 PM
To: HARTWICK Ken -FINANCE
Cc: Imbrogno, Serge (ENERGY); KING Catriona -OFFCORPSEC
Subject: Re: Minister Letter to OPG

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<20170413-Letter from Province to OPG-LSB ESP Consolidated v2_clean.docx>

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Office of the Minister

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Toronto ON M7A 2E1
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Fax: 416-327-6754

Ministère de l'Énergie

Bureau du ministre

4e étage, édifice Hearst
900, rue Bay
Toronto ON M7A 2E1
Tél. : 416 327-6758
Téléc. : 416 327-6754

Ontario

APR 1 3 2017

MC-2017-750

Mr. Bernard Lord
Board Chair
Ontario Power Generation Inc.
700 University Avenue, 19th Floor
Toronto ON M5G 1X6

Dear Mr. Lord:

I am writing to provide Ontario Power Generation Inc. (OPG) with additional detail regarding elements of Ontario's Fair Hydro Plan as announced by the government on March 2, 2017. Given OPG's active participation in the electricity market and its expertise in rate regulated accounting and investment stewardship over significant pension and nuclear funds, I am writing specifically to request OPG's involvement in the implementation of the Global Adjustment (GA) refinancing that will be required in relation to changes to the GA proposed as a component of Ontario's Fair Hydro Plan.

The Government of Ontario proposes to take steps to lower electricity bills by 25 per cent for a typical residential electricity consumer relative to what those bills would otherwise have been without Ontario's Fair Hydro Plan. Changes to the GA are proposed to be a component of the 25 per cent rate relief. This proposed 25 per cent rate relief measure would also be inclusive of the 8 per cent rebate that is already in effect under the *Ontario Rebate for Electricity Consumers Act, 2016* and the savings that are anticipated to result from the proposed shifting of the Ontario Electricity Support Program (OESP) and the Rural or Remote Rate Protection (RRPP) program costs from ratepayers to provincial revenues.

I am requesting that OPG, working with the Ministry of Energy, the Independent Electricity System Operator (IESO), the Ontario Financing Authority (OFA) and their respective advisors, consider and recommend a plan for financing mechanisms that could achieve the Province's objectives with respect to Ontario's Fair Hydro Plan, all in accordance with any legislation and regulations currently in place, or that may subsequently be implemented, with respect to facilitating Ontario's Fair Hydro Plan.

In particular, the Province would like OPG's financing plan to consider, among other things, structures and methods that would permit refinancing of a portion of the GA in order to reduce electricity prices for specified electricity consumers, with the costs of the refinancing to be recovered over a period of no more than 30 years, all in accordance with any legislation and regulations currently in place, or that may subsequently be implemented, with respect to facilitating Ontario's Fair Hydro Plan. I would also expect OPG's financing plan to include:

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I. Potential structures for the financing, which may include, as appropriate, a special purpose vehicle (SPV) created for the financing;

II. Potential financing mechanisms and instruments, including senior debt and subordinated debt; and

III. Identification of the capital markets and jurisdictions that can be accessed to refinance a portion of the GA.

The Province recognizes the need to provide OPG with the necessary assurances with respect to recovery of the principal, interest and operating and other costs of any financing, and will consider the specific requirements identified by OPG and its advisors, including in any future legislation and regulations that would govern the mechanics and requirements of the financing entity. I would also request that your plan identify any amendments to OPG's governing legislation and constating documents needed to facilitate the implementation of the financing plan in a commercial manner.

I would further expect that OPG's financing plan would be implemented in an effective and cost-efficient manner by OPG balancing the need to protect the interests of ratepayers and the financial health of OPG. I would also further expect that OPG will ensure that any of its proposed borrowing and other activities under its financing plan take into account the "inter-generational" approach that the Province is intending to provide in executing Ontario's Fair Hydro Plan.

I look forward to receiving a detailed plan that has the support of the OPG Board of Directors by June 1, 2017.

Sincerely,

Glenn Thibeault
Minister

c: Hon. Charles Sousa, Minister of Finance
Scott Thompson, Deputy Minister of Finance
Serge Imbrogno, Deputy Minister of Energy
Gadi Mayman, CEO, Ontario Financing Authority
Jeffrey Lyash, President and CEO, Ontario Power Generation

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APR 1 3 2017

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Board Chair
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c: Hon. Charles Sousa, Minister of Finance
Scott Thompson, Deputy Minister of Finance
Serge Imbrogno, Deputy Minister of Energy
Gadi Mayman, CEO, Ontario Financing Authority
Jeffrey Lyash, President and CEO, Ontario Power Generation

From: Gadi Mayman
To: Mike Manning
Subject: Fw: Moody"s Report
Date: Monday, March 13, 2017 8:27:22 AM
Attachments: Moody"s Global Approach to Rating Securities Backed by Utility Cost Reco....pdf
ATT00001.htm

With the attachment.

_____

From: Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>
Sent: Sunday, March 12, 2017 11:42 AM
To: Gadi Mayman
Cc: Scott Thompson (CAB); David McLean (MOF)
Subject: Fwd: Moody's Report

Hi Gadi,

Please see attached Moody's report re: the treatment of the securitization of utility charges via special legislation. While this is a U.S. based report it is instructive in respect to what we are trying to achieve.

Let's chat next week about how we approach Moody's on this.

Ali Ghiassi
Chief of Staff
Minister of Finance
416.948.5409

Begin forwarded message:

From: "Teliszewsky, Andrew (ENERGY)"
<Andrew.Teliszewsky@ontario.ca<mailto:Andrew.Teliszewsky@ontario.ca>>
To: "Bevan, Andrew (OPO)" <Andrew.Bevan@ontario.ca<mailto:Andrew.Bevan@ontario.ca>>, "McEachern, Gillian (OPO)" <Gillian.McEachern@ontario.ca<mailto:Gillian.McEachern@ontario.ca>>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca<mailto:Ali.Ghiassi@ontario.ca>>, "Jancik, Mike (TBS)" <Mike.Jancik@ontario.ca<mailto:Mike.Jancik@ontario.ca>>, "Rowe, Mary (OPO)" <Mary.Rowe@ontario.ca<mailto:Mary.Rowe@ontario.ca>>, "Donelson, Philip (OPO)" <Philip.Donelson@ontario.ca<mailto:Philip.Donelson@ontario.ca>>, "Mksyartinian, Jacob (OPO)" <Jacob.Mksyartinian@ontario.ca<mailto:Jacob.Mksyartinian@ontario.ca>>, "Nguyen, Marianne (MOF)" <Marianne.Nguyen@ontario.ca<mailto:Marianne.Nguyen@ontario.ca>>, "Pichelli, Jason (TBS)" <Jason.Pichelli@ontario.ca<mailto:Jason.Pichelli@ontario.ca>>
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Subject: Moody's Report

Good Morning:

In case folks are keen for a bit of light reading, enclosed is a report by Moody's on Securitization of Utility charges, similar to what the Fair Hydro Plan will enact.

While this report is based on US information and about 18-months old, OPG and external legal recommended it to us as part of our implementation activities.

It's generally an understandable read, while not all notes and references are exact correlates to the Canadian /

Ontario context, it does provide a good "how to" and "quick facts" - all in about 8 pages.

Take care.

Andrew Teliszewsky
416-327-3550

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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2. EXECUTIVE SUMMARY 1
3. ANALYZING THE RISK FACTORS 3
4. MONITORING 6
MOODY'S RELATED RESEARCH 8

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» contacts continued on the last page

1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.
[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols and Definitions, which is available here, for further information.

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Report Number: SF404788

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INVESTORS SERVICE

From: Gadi Mayman
To: Mike Manning
Subject: Fw: Moody"s Report
Date: Monday, March 13, 2017 8:26:43 AM

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From: Gadi Mayman
Sent: Sunday, March 12, 2017 1:36 PM
To: Serge Imbrogno (ENERGY); Steen Hume (CAB)
Cc: Scott Thompson (CAB); Bonnie Lemcke; Scott Nelms (ENERGY); Ronald Kwan; Nancy Kennedy (MOHLTC)
Subject: Re: Moody's Report

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Sent from my BlackBerry 10 smartphone on the Rogers network.

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Gadi

Original Message
From: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Sent: Sunday, March 12, 2017 12:21 PM
To: Ghiassi, Ali (MOF)
Cc: Scott Thompson (CAB); David McLean (MOF)
Subject: Re: Moody's Report

Moody's, unlike DBRS, was quite negative on our approach when we spoke to them last week, so we'll need to be

very careful when we speak to them. If you read through the conditions that they list in the report that you've attached, you'd have to take a very optimistic approach to not assume we're at the outside edge, or beyond, what they'd consider acceptable.

Fortunately, they don't rate OPG at the moment, because the utilities analyst on our call with them was the one who was most negative on our approach, and said that his view, at first glance, was that they are always concerned that regulatory assets can turn into stranded debt, and that this was the largest regulatory asset that he had ever seen. The difference in law between Canada and the US was also something that he pointed to, and the inability of the government to bind future governments. The provincial analyst on the call was less fussed, particularly after we made it clear that this would be funded on an as needed basis, not all $28 billion up front.

We should discuss this further tomorrow, because if it's Moody's that Energy and OPG are counting on to make this effective, there's a lot of cautious work to be done.

Gadi

> On Mar 12, 2017, at 11:42 AM, Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca> wrote:
>
> Hi Gadi,
>
> Please see attached Moody's report re: the treatment of the securitization of utility charges via special legislation. While this is a U.S. based report it is instructive in respect to what we are trying to achieve.
>
> Let's chat next week about how we approach Moody's on this.
>
> Ali Ghiassi
> Chief of Staff
> Minister of Finance
> 416.948.5409
>
>
> Begin forwarded message:
>
> From: "Teliszewsky, Andrew (ENERGY)" <Andrew.Teliszewsky@ontario.ca<mailto:Andrew.Teliszewsky@ontario.ca>>
> To: "Bevan, Andrew (OPO)" <Andrew.Bevan@ontario.ca<mailto:Andrew.Bevan@ontario.ca>>, "McEachern, Gillian (OPO)" <Gillian.McEachern@ontario.ca<mailto:Gillian.McEachern@ontario.ca>>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca<mailto:Ali.Ghiassi@ontario.ca>>, "Jancik, Mike (TBS)" <Mike.Jancik@ontario.ca<mailto:Mike.Jancik@ontario.ca>>, "Rowe, Mary (OPO)" <Mary.Rowe@ontario.ca<mailto:Mary.Rowe@ontario.ca>>, "Donelson, Philip (OPO)" <Philip.Donelson@ontario.ca<mailto:Philip.Donelson@ontario.ca>>, "Mksyartinian, Jacob (OPO)" <Jacob.Mksyartinian@ontario.ca<mailto:Jacob.Mksyartinian@ontario.ca>>, "Nguyen, Marianne (MOF)" <Marianne.Nguyen@ontario.ca<mailto:Marianne.Nguyen@ontario.ca>>, "Pichelli, Jason (TBS)" <Jason.Pichelli@ontario.ca<mailto:Jason.Pichelli@ontario.ca>>
> Cc: "Whittington, Matt (ENERGY)" <Matt.Whittington@ontario.ca<mailto:Matt.Whittington@ontario.ca>>, "Campbell, David (ENERGY)" <David.Campbell2@ontario.ca<mailto:David.Campbell2@ontario.ca>>, "Marangoni, Emily (OPO)" <Emily.Marangoni@ontario.ca<mailto:Emily.Marangoni@ontario.ca>>
> Subject: Moody's Report
>
> Good Morning:
>
> In case folks are keen for a bit of light reading, enclosed is a report by Moody's on Securitization of Utility charges, similar to what the Fair Hydro Plan will enact.
>
> While this report is based on US information and about 18-months old, OPG and external legal recommended it to us as part of our implementation activities.
>

> It's generally an understandable read, while not all notes and references are exact correlates to the Canadian / Ontario context, it does provide a good "how to" and "quick facts" - all in about 8 pages.
>
> Take care.
>
> Andrew Teliszewsky
> 416-327-3550
>
>
>
>
> <Moody's Global Approach to Rating Securities Backed by Utility Cost Reco....pdf>

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Moody's, unlike DBRS, was quite negative on our approach when we spoke to them last week, so we'll need to be

very careful when we speak to them. If you read through the conditions that they list in the report that you've attached, you'd have to take a very optimistic approach to not assume we're at the outside edge, or beyond, what they'd consider acceptable.

Fortunately, they don't rate OPG at the moment, because the utilities analyst on our call with them was the one who was most negative on our approach, and said that his view, at first glance, was that they are always concerned that regulatory assets can turn into stranded debt, and that this was the largest regulatory asset that he had ever seen. The difference in law between Canada and the US was also something that he pointed to, and the inability of the government to bind future governments. The provincial analyst on the call was less fussed, particularly after we made it clear that this would be funded on an as needed basis, not all $28 billion up front.

We should discuss this further tomorrow, because if it's Moody's that Energy and OPG are counting on to make this effective, there's a lot of cautious work to be done.

Gadi

> On Mar 12, 2017, at 11:42 AM, Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca> wrote:
>
> Hi Gadi,
>
> Please see attached Moody's report re: the treatment of the securitization of utility charges via special legislation. While this is a U.S. based report it is instructive in respect to what we are trying to achieve.
>
> Let's chat next week about how we approach Moody's on this.
>
> Ali Ghiassi
> Chief of Staff
> Minister of Finance
> 416.948.5409
>
>
> Begin forwarded message:
>
> From: "Teliszewsky, Andrew (ENERGY)" <Andrew.Teliszewsky@ontario.ca<mailto:Andrew.Teliszewsky@ontario.ca>>
> To: "Bevan, Andrew (OPO)" <Andrew.Bevan@ontario.ca<mailto:Andrew.Bevan@ontario.ca>>, "McEachern, Gillian (OPO)" <Gillian.McEachern@ontario.ca<mailto:Gillian.McEachern@ontario.ca>>, "Ghiassi, Ali (MOF)" <Ali.Ghiassi@ontario.ca<mailto:Ali.Ghiassi@ontario.ca>>, "Jancik, Mike (TBS)" <Mike.Jancik@ontario.ca<mailto:Mike.Jancik@ontario.ca>>, "Rowe, Mary (OPO)" <Mary.Rowe@ontario.ca<mailto:Mary.Rowe@ontario.ca>>, "Donelson, Philip (OPO)" <Philip.Donelson@ontario.ca<mailto:Philip.Donelson@ontario.ca>>, "Mksyartinian, Jacob (OPO)" <Jacob.Mksyartinian@ontario.ca<mailto:Jacob.Mksyartinian@ontario.ca>>, "Nguyen, Marianne (MOF)" <Marianne.Nguyen@ontario.ca<mailto:Marianne.Nguyen@ontario.ca>>, "Pichelli, Jason (TBS)" <Jason.Pichelli@ontario.ca<mailto:Jason.Pichelli@ontario.ca>>
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> Subject: Moody's Report
>
> Good Morning:
>
> In case folks are keen for a bit of light reading, enclosed is a report by Moody's on Securitization of Utility charges, similar to what the Fair Hydro Plan will enact.
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> While this report is based on US information and about 18-months old, OPG and external legal recommended it to us as part of our implementation activities.
>

> It's generally an understandable read, while not all notes and references are exact correlates to the Canadian / Ontario context, it does provide a good "how to" and "quick facts" - all in about 8 pages.
>
> Take care.
>
> Andrew Teliszewsky
> 416-327-3550
>
>
>
>
> <Moody's Global Approach to Rating Securities Backed by Utility Cost Reco....pdf>

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From: Gadi Mayman
To: Mike Manning
Subject: Fw: Moody"s Report
Date: Monday, March 13, 2017 8:27:22 AM
Attachments: Moody"s Global Approach to Rating Securities Backed by Utility Cost Reco....pdf
ATT00001.htm

With the attachment.

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From: Ghiassi, Ali (MOF) <Ali.Ghiassi@ontario.ca>
Sent: Sunday, March 12, 2017 11:42 AM
To: Gadi Mayman
Cc: Scott Thompson (CAB); David McLean (MOF)
Subject: Fwd: Moody's Report

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Minister of Finance
416.948.5409

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Take care.

Andrew Teliszewsky
416-327-3550

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.
[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols and Definitions, which is available here, for further information.

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Report Number: SF404788

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MOODY'S
INVESTORS SERVICE

From: Gadi Mayman
To: Mike Manning; Ronald Kwan
Cc: Anna Strathy; Gavin He
Subject: Fw: OFA：IESO
Date: Thursday, April 13, 2017 8:00:48 AM

Hi Mike and Ron, could one of you please get back to Anthony and handle this?

Thanks,
Gadi

From: Anthony Martinello
Sent: Thursday, April 13, 2017 7:41 AM
To: Gadi Mayman
Cc: Kim Marshall; Michael Boll
Subject: OFA：IESO

Mr. Mayman,
Kim and I would like to set up a 30min call with you to discuss the proposed Fair Hydro rollout and the potential impact on the IESO credit needs.
Would you be available next week/preferred date? Let me know and I will send out a meeting invite.
Regards

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From:	Gadi Mayman
To:	Bonnie Lemcke; Ken Kandeepan; Mike Manning
Cc:	Keley Katona (ENERGY); David McLean (MOF); Christopher Pearce (MOI); Steen Hume (CAB); Christina Zhang; Ronald Kwan
Subject:	Fw: OFHP - Media Briefing
Date:	Thursday, March 02, 2017 9:37:13 AM
Attachments:	OFHP - Media Briefing-Mar1_800.pptx

Hi Bonnie. This can be shared with DBRS now in advance of our 11 o'clock call.

Thanks,
Gadi

Original Message
From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Thursday, March 2, 2017 9:33 AM
To: Gadi Mayman
Subject: OFHP - Media Briefing

Ontario's Fair Hydro Plan:
Providing Relief for Consumers

Technical Briefing
Ontario Ministry of Energy

March 2, 2017

Outline of Technical Briefing

1. Overview of Ontario's Electricity Market

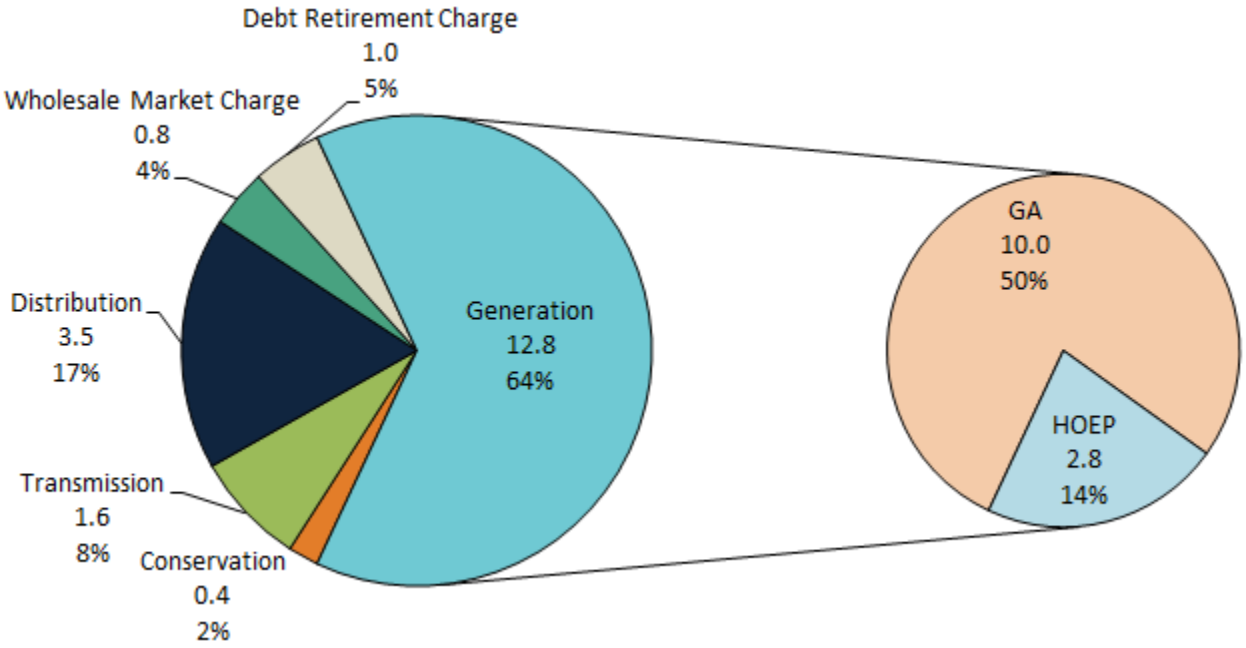
2. Ontario's Fair Hydro Plan – Providing Relief for Consumers

3. Questions

Ontario's Electricity Market

- In 2015, generation accounted for 64% of total electricity system costs. Total system costs in 2015 were $20 billion.

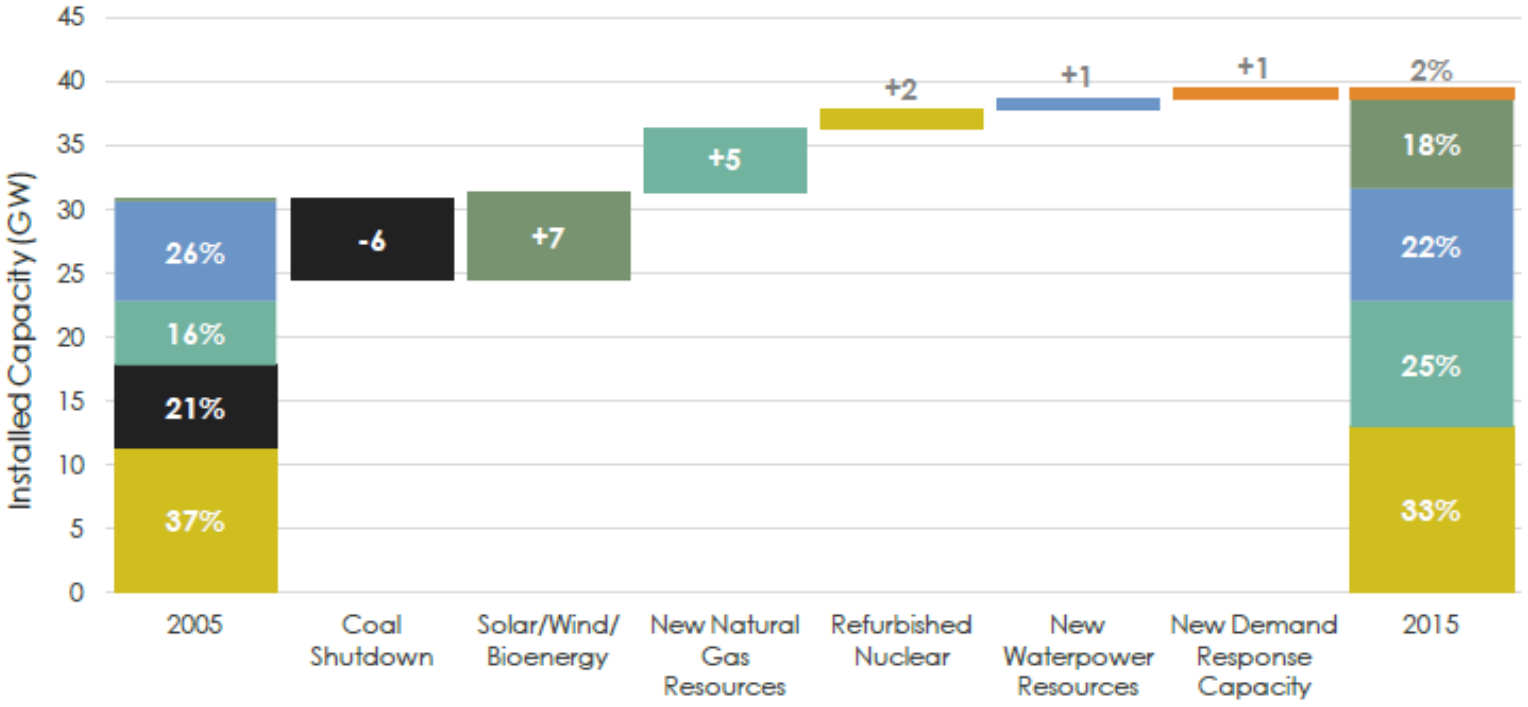
2015 Electricity System Cost
$ billion



Source: IESO

Significant Change in Supply Mix

- Between 2005 and 2015, government invested more than $50 billion in the electricity system, including $35 billion in electricity generation to restore reliability, replace coal and meet environmental objectives.
  - Electricity costs are increasing as necessary investments are made to decarbonize and modernize the province's electricity infrastructure.



Source: *IESO*

Electricity Prices Have Increased

- Since 2010, electricity prices have increased at a rate higher than the Consumer Price Index (CPI).

Typical Residential Electricity Bills
in $ per month, 750 kWh consumption

Source: *Ministry of Energy*

Recent Actions To Mitigate Electricity Rates

- Following the 2016 Throne Speech, several actions were announced to further reduce electricity costs.
  - As of January 1, 2017, Ontario is rebating an amount equal to the provincial portion of the HST to reduce eligible residential, small business and farm electricity bills by 8%.
  - Expanded support available to eligible rural ratepayers by updating Rural or Remote Rate Protection (RRRP) with additional relief, decreasing total electricity bills by an average of $45 each month when combined with the 8% rebate.
  - Expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants.
  - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.
  - Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – up to $129 million in cost savings.

Ontario’s Fair Hydro Plan

Ontario's Fair Hydro Plan

- Ontario is lowering electricity bills by 25 per cent for the typical residential customer and holding rate increases to the rate of inflation for four years. Small businesses and farms would also benefit from this initiative.

- People with low incomes, those served by local distribution companies (LDCs) with the highest distribution costs, OESP recipients and On-Reserve First Nation households would benefit from even greater reductions to their electricity bills.

- These new measures will cost the government up to $2.5 billion over the next three years.

- Government intends to introduce legislation to enable Ontario's Fair Hydro Plan.

1. Refinancing Global Adjustment

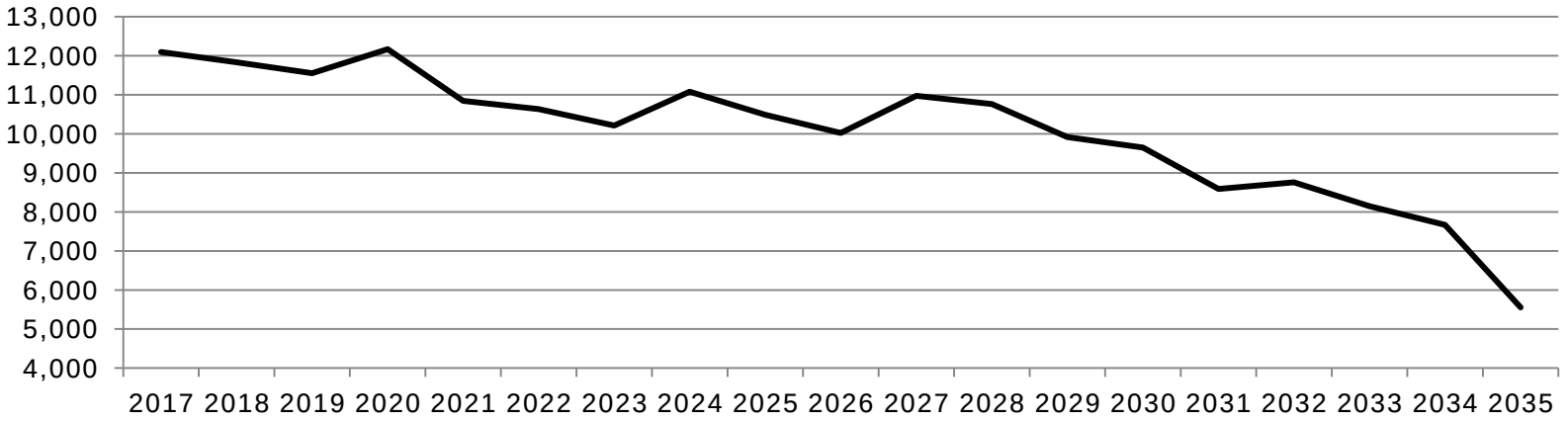
Refinancing the Global Adjustment

- Refinancing the Global Adjustment (GA) would provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
  - 25% reduction on average for the typical residential customer and rates would follow inflation for the next 4 years.

- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about $2.5 billion per year on average over the first ten years, with a maximum annual interest cost of $1.4 billion.

- This measure would share the associated costs more fairly. The chart below shows how Global Adjustment (GA) cost is front-end loaded and forecast to decline over time.

Forecast Global Adjustment Cost (nominal $ million)



Source: IESO

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract term.

- By recognizing that generation assets are expected to continue to provide benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

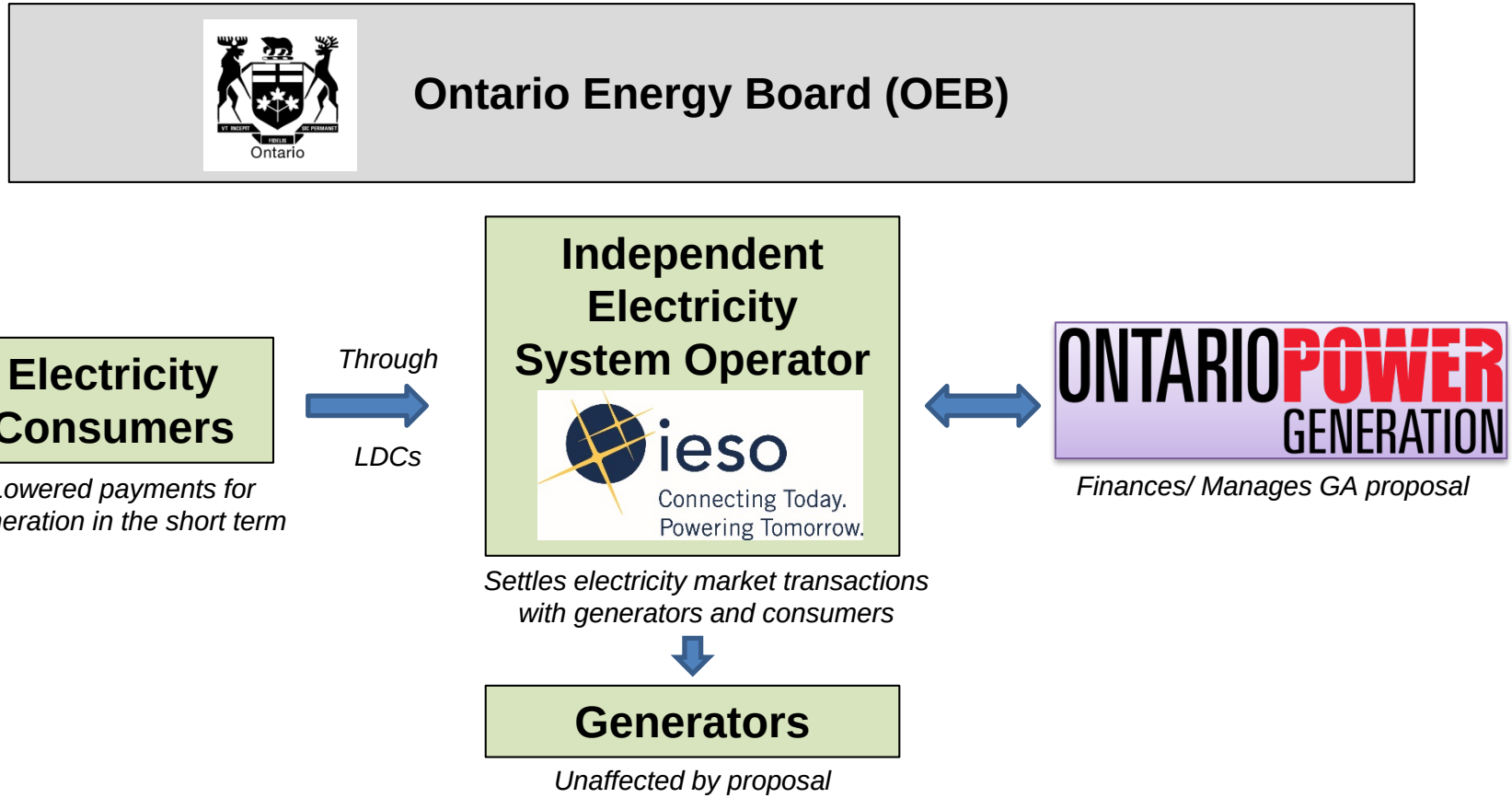
- In the early years, a portion of the costs covered by the GA would be financed to reduce pressure on electricity ratepayers.

- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be recovered from ratepayers.

"The amount consumers pay today could be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged to households would more closely reflect the true economic costs of the assets."
Globe and Mail Op-Ed (February 28, 2017) – Ivey Business School

Implementation

- The following entities would implement the proposed Global Adjustment (GA) refinancing mechanism.
  - The government intends to introduce legislation that would, if passed, enable IESO and OPG to work together to refinance the GA over a longer period of time. The legislation would also outline the role for the OEB, as it relates to the financing proposal.



2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Fair Hydro Plan initiatives to help vulnerable consumers include:
  - Broadening Rural or Remote Rate Protection (RRRP) program to provide distribution charge relief for the customers of the costliest local distribution companies (LDCs).
  - Enhancing the Ontario Electricity Support Program (OESP) and working to ensure the program uptake is as close as possible to 100%.
  - Establishing a new First Nations On-Reserve Delivery Credit.
  - Establishing a new Affordability Fund which would support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.

- All of these initiatives would provide benefits to eligible consumers on top of the benefits they would receive from Global Adjustment (GA) refinancing.

- As part of the Fair Hydro Plan, these programs would be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
  - These programs would be funded by provincial revenues because they all provide targeted benefits to vulnerable consumers.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- Rural or Remote Rate Protection (RRRP) provides a rate subsidy to rural or remote residential customers who are faced with higher distribution costs compared to urban areas.
  - The RRRP is currently provided to approximately 350,000 Hydro One R2 residential customers in Ontario.

- The Province would expand the RRRP to provide distribution charge relief to additional hydro customers served by local distribution companies (LDCs) with the highest distribution rates, including: Hydro One R1, Northern Ontario Wires Inc., Lakeland Parry Sound, Chapleau PUC, Sioux Lookout Hydro, InnPower, Atikokan Hydro and Algoma Power. This would extend RRRP availability to about 800,000 customers.

- The new benefits would vary from LDC to LDC. For example:
  - A Hydro One R2 customer consuming 2,500kWh a month would see distribution cost reductions of around $75 a month.
  - A Hydro One R1 customer consuming 1,000kWh a month would see distribution cost reductions of around $18 a month.
  - An InnPower customer consuming 1,000kWh a month would see distribution cost reductions of around $12 a month.

- The government intends to introduce legislation to broaden the RRRP and to move forward in having RRRP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Enhancing the Ontario Electricity Support Program (OESP)

- The OESP would be enhanced by increasing its monthly credits by 50%, expanded to cover more low-income Ontarians, and increasing uptake to as close to 100% as possible.
  - Sliding Scale #1 outlines basic program benefits, and Sliding Scale #2 outlines enhanced benefits for Indigenous households, electrically heated households, and households with certain medically intensive medical equipment.
- The government intends to introduce legislation to enhance the OESP and to move forward in having OESP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Existing OESP Credit Scales

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$30	$30	$34	$38	$42	$50	$50
$28,001 - $39,000			$30	$34	$38	$42	$50
$39,001 - $48,000					$30	$34	$38
$48,001 - $52,000							$30

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$50	$55	$60	$75	$75
$28,001 - $39,000			$45	$50	$55	$60	$75
$39,001 - $48,000					$45	$50	$55
$48,001 - $52,000							$45

Proposed +50% OESP Credit Increase*

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$51	$57	$63	$75	$75
$28,001 - $39,000		$40	$45	$51	$57	$63	$75
$39,001 - $48,000			$35	$40	$45	$51	$57
$48,001 - $52,000					$35	$40	$45

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$68	$68	$75	$83	$90	$113	$113
$28,001 - $39,000		$60	$68	$75	$83	$90	$113
$39,001 - $48,000			$52	$60	$68	$75	$83
$48,001 - $52,000					$52	$60	$68

***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.

- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups, developed the following recommendations:
  - Eliminating the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of $85.
  - Automatically qualify on-reserve First Nations households (~21,500 customers).

- The government intends to introduce legislation to create the First Nations On-Reserve Delivery Credit and to move forward in having its costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Establishing a New Affordability Fund

- The Affordability Fund would assist electricity customers who cannot qualify for low-income conservation programs and need financial assistance to undertake energy efficiency improvements.

- The Affordability Fund would provide LDCs with an additional tool to help customers in need. LDCs would use the Fund to provide support to customers for energy efficiency improvements to help reduce their future electricity bills.

- Measures supported by the Fund are expected to be similar to those available under the existing low-income conservation program, such as energy efficient lighting and appliances and, for electrically heated homes, insulation and weather stripping. Cold climate air source heat pumps would also be an eligible measure.

- The Province intends to work with Hydro One, in consultation with all other LDCs, to establish an independent Trust to serve as the administrator of the Affordability Fund.

- The Province would pay for the Fund through provincial revenues.

3. Enhancing Competitiveness for Small Manufacturers and Industrials

Enhancing Competitiveness for Small Manufacturers and Industrials

- The Industrial Conservation Initiative (ICI) provides a strong incentive for participating consumers to reduce their consumption during peak hours to reduce their costs.

- Expanding the eligibility threshold for the ICI would provide small manufacturers and industrials the opportunity to save on their electricity costs, while reducing the province's peak demand. The expanded ICI would include
  - Extending eligibility to small manufacturers and industrials with average monthly peak demand over 500 kilowatts; and
  - Targeting eligibility to energy intensive industries with the North American Industry Classification System (NAICS) codes 31 - 33 (i.e., Manufacturing).

- Under the expanded ICI, small manufacturers and industrials whose electricity demand is currently too low to qualify for ICI, would now be eligible for the expanded ICI if they wish to participate.

- Small manufacturers would also benefit from funding social programs through provincial revenues.

- In addition, the Ministry would assist small manufacturers and industrials' participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

4. Market Efficiencies / Bending the Cost Curve

Ongoing Efforts To Bend The Cost Curve of Ontario's Electricity System

- Since 2010, the government has taken a number of important actions to reduce electricity system costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.

Improving Electricity Sector Efficiency

The Ontario Energy Board (OEB)

- The Ontario Energy Board (OEB) regulates and licences more than 70 Local Distribution Companies (LDCs) in the province. The OEB would identify opportunities for cost efficiencies by:
  - Encouraging shared partnerships on services between utilities, which will help reduce costs and encourage further innovation for small to medium sized utilities;
  - Reviewing regulatory requirements to reduce “red tape” and eliminate unnecessary costs on LDCs; and
  - Looking at opportunities to further drive transmitter and LDC efficiencies and productivity improvements, including the use of innovative technologies and business processes.

Independent Electricity System Operator

- The IESO plans for the province’s electricity needs, balances the supply and demand for electricity in Ontario in real time and administers conservation programs.

- The IESO’s Market Renewal includes such initiatives as developing a capacity auction process, introducing a day-ahead energy market, etc.

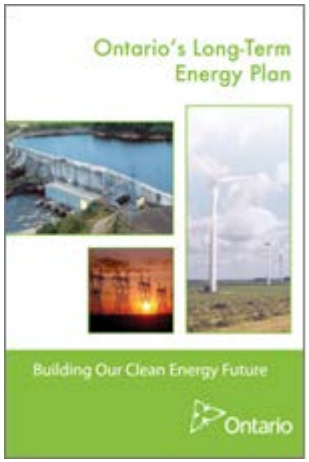
- Changes related to IESO’s Market Renewal initiatives are estimated to save at least $200 million per year, starting in 2021.

2017 Long-Term Energy Plan

- The Ministry of Energy is developing the next Long-Term Energy Plan (LTEP) after receiving feedback from the public, stakeholders and indigenous communities during the engagement process that took place from October to January 2017.

- The LTEP process is designed to be iterative and flexible and only commit resources as demand needs become clearer.

- The Ministry of Energy anticipates that the next LTEP will be published in spring 2017.



From:	Gadi Mayman
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Cc:	Keley Katona (ENERGY); David McLean (MOF); Christopher Pearce (MOI); Steen Hume (CAB); Christina Zhang; Ronald Kwan
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Sent: Thursday, March 2, 2017 9:33 AM
To: Gadi Mayman
Subject: OFHP - Media Briefing

Ontario's Fair Hydro Plan:
Providing Relief for Consumers

Technical Briefing
Ontario Ministry of Energy

March 2, 2017

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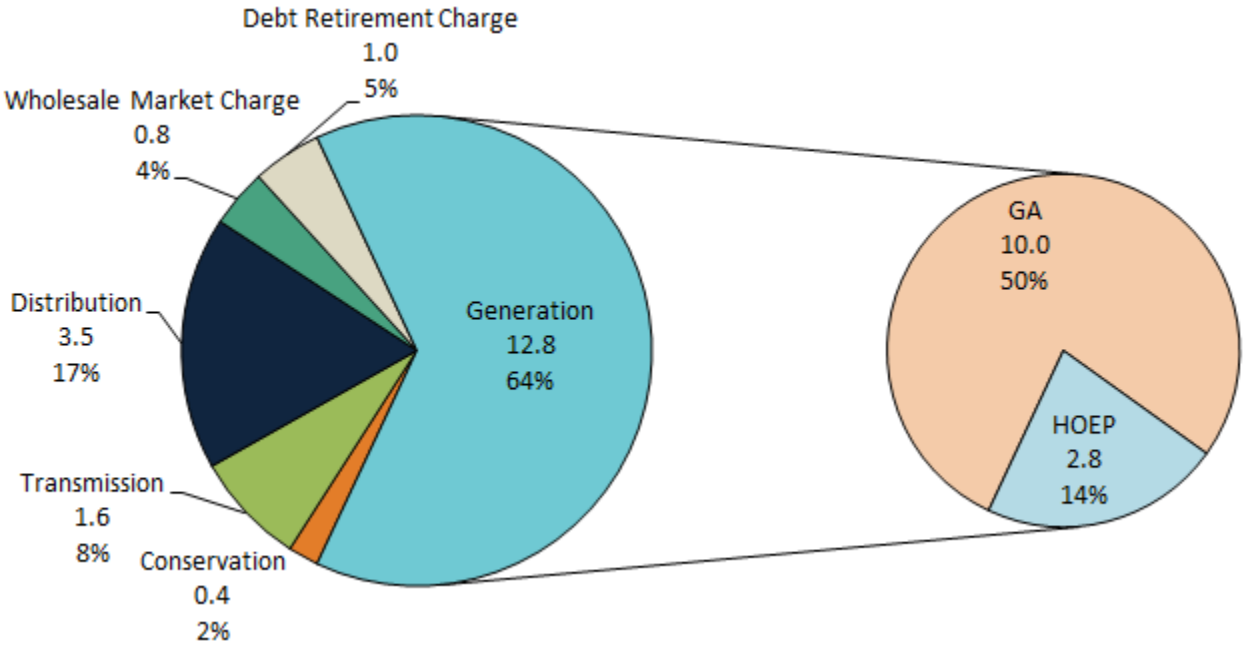

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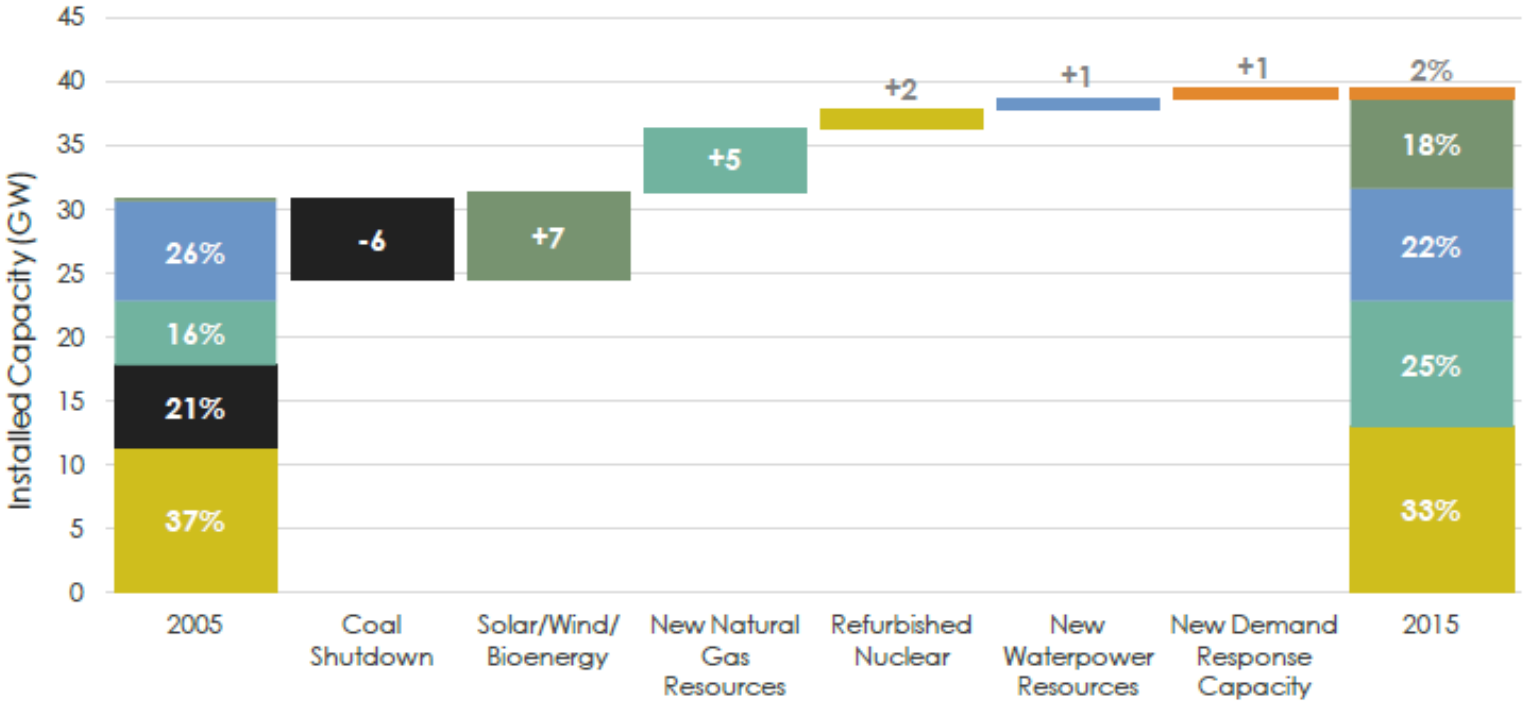

Source: *IESO*

Electricity Prices Have Increased

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Typical Residential Electricity Bills
in $ per month, 750 kWh consumption

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Recent Actions To Mitigate Electricity Rates

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1. Refinancing Global Adjustment

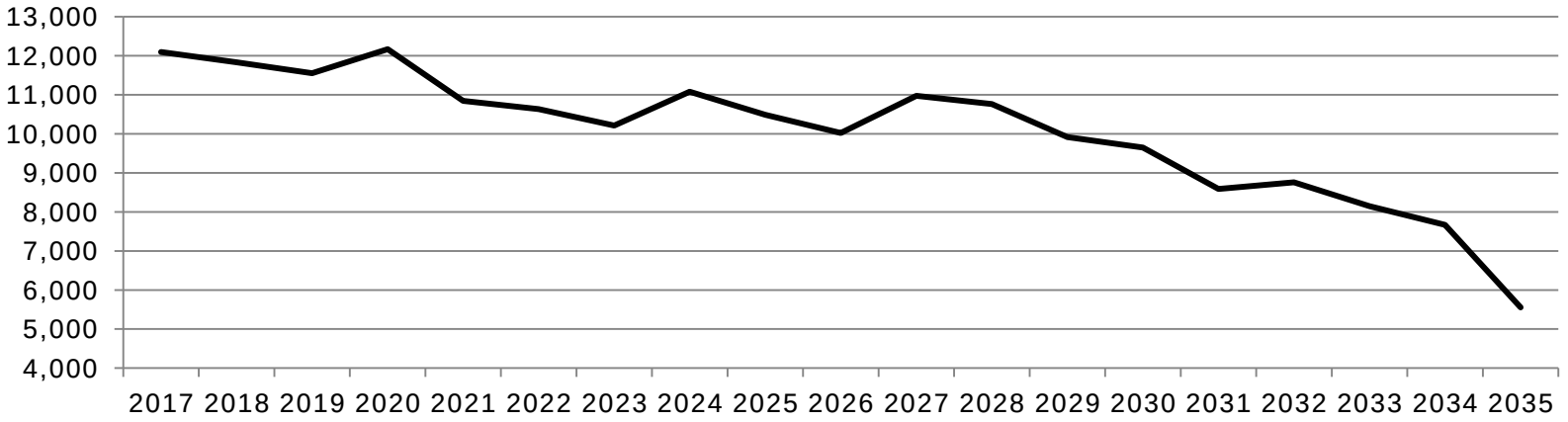
Refinancing the Global Adjustment

- Refinancing the Global Adjustment (GA) would provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
  - 25% reduction on average for the typical residential customer and rates would follow inflation for the next 4 years.

- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about $2.5 billion per year on average over the first ten years, with a maximum annual interest cost of $1.4 billion.

- This measure would share the associated costs more fairly. The chart below shows how Global Adjustment (GA) cost is front-end loaded and forecast to decline over time.

Forecast Global Adjustment Cost (nominal $ million)



Source: IESO

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract term.

- By recognizing that generation assets are expected to continue to provide benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

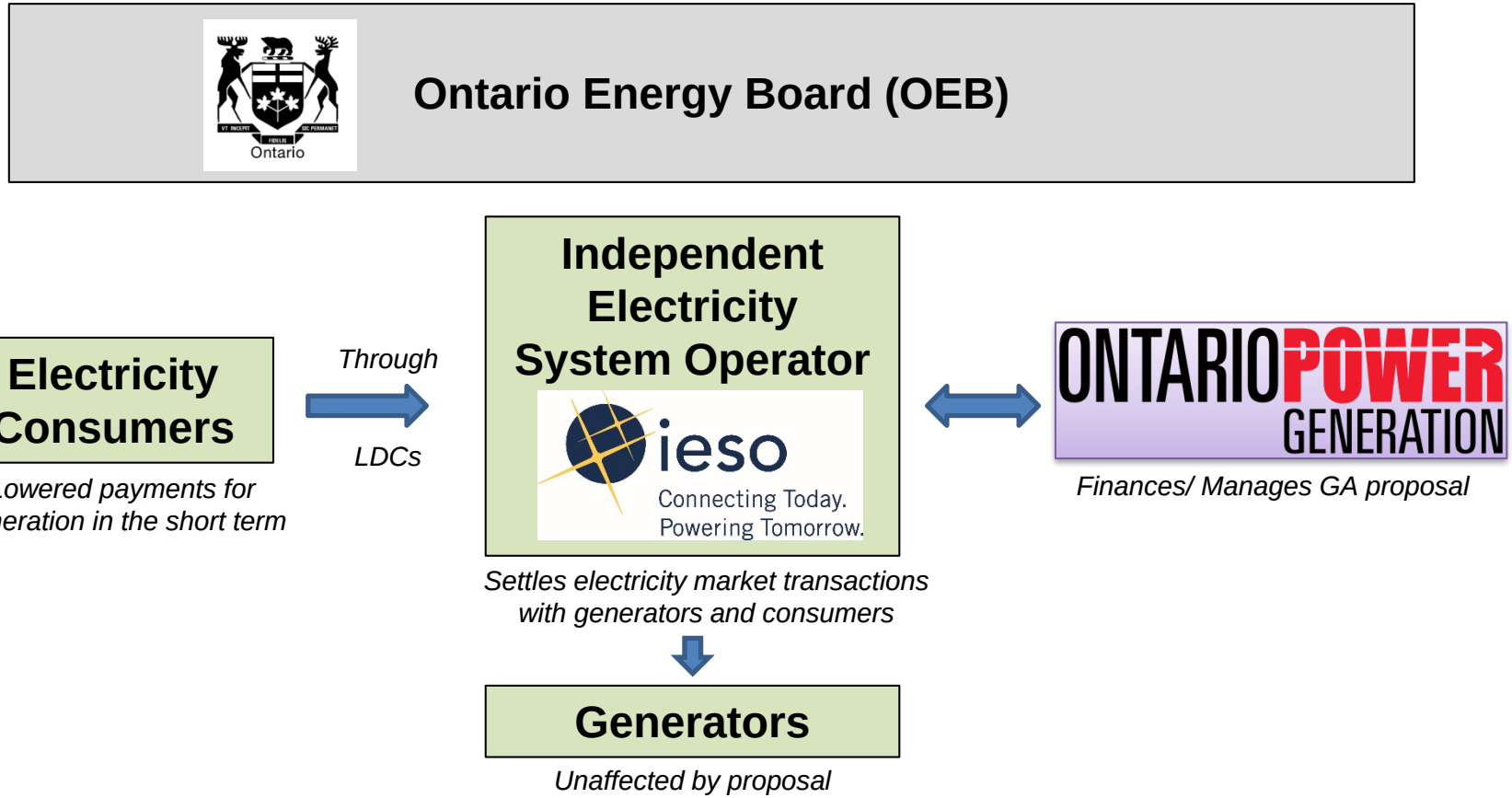
- In the early years, a portion of the costs covered by the GA would be financed to reduce pressure on electricity ratepayers.

- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be recovered from ratepayers.

"The amount consumers pay today could be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged to households would more closely reflect the true economic costs of the assets."
Globe and Mail Op-Ed (February 28, 2017) – Ivey Business School

Implementation

- The following entities would implement the proposed Global Adjustment (GA) refinancing mechanism.
  - The government intends to introduce legislation that would, if passed, enable IESO and OPG to work together to refinance the GA over a longer period of time. The legislation would also outline the role for the OEB, as it relates to the financing proposal.



2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Fair Hydro Plan initiatives to help vulnerable consumers include:
  - Broadening Rural or Remote Rate Protection (RRRP) program to provide distribution charge relief for the customers of the costliest local distribution companies (LDCs).
  - Enhancing the Ontario Electricity Support Program (OESP) and working to ensure the program uptake is as close as possible to 100%.
  - Establishing a new First Nations On-Reserve Delivery Credit.
  - Establishing a new Affordability Fund which would support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.

- All of these initiatives would provide benefits to eligible consumers on top of the benefits they would receive from Global Adjustment (GA) refinancing.

- As part of the Fair Hydro Plan, these programs would be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
  - These programs would be funded by provincial revenues because they all provide targeted benefits to vulnerable consumers.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- Rural or Remote Rate Protection (RRRP) provides a rate subsidy to rural or remote residential customers who are faced with higher distribution costs compared to urban areas.
  - The RRRP is currently provided to approximately 350,000 Hydro One R2 residential customers in Ontario.

- The Province would expand the RRRP to provide distribution charge relief to additional hydro customers served by local distribution companies (LDCs) with the highest distribution rates, including: Hydro One R1, Northern Ontario Wires Inc., Lakeland Parry Sound, Chapleau PUC, Sioux Lookout Hydro, InnPower, Atikokan Hydro and Algoma Power. This would extend RRRP availability to about 800,000 customers.

- The new benefits would vary from LDC to LDC. For example:
  - A Hydro One R2 customer consuming 2,500kWh a month would see distribution cost reductions of around $75 a month.
  - A Hydro One R1 customer consuming 1,000kWh a month would see distribution cost reductions of around $18 a month.
  - An InnPower customer consuming 1,000kWh a month would see distribution cost reductions of around $12 a month.

- The government intends to introduce legislation to broaden the RRRP and to move forward in having RRRP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Enhancing the Ontario Electricity Support Program (OESP)

- The OESP would be enhanced by increasing its monthly credits by 50%, expanded to cover more low-income Ontarians, and increasing uptake to as close to 100% as possible.
  - Sliding Scale #1 outlines basic program benefits, and Sliding Scale #2 outlines enhanced benefits for Indigenous households, electrically heated households, and households with certain medically intensive medical equipment.
- The government intends to introduce legislation to enhance the OESP and to move forward in having OESP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Existing OESP Credit Scales

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$30	$30	$34	$38	$42	$50	$50
$28,001 - $39,000			$30	$34	$38	$42	$50
$39,001 - $48,000					$30	$34	$38
$48,001 - $52,000							$30

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$50	$55	$60	$75	$75
$28,001 - $39,000			$45	$50	$55	$60	$75
$39,001 - $48,000					$45	$50	$55
$48,001 - $52,000							$45

Proposed +50% OESP Credit Increase*

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$51	$57	$63	$75	$75
$28,001 - $39,000		$40	$45	$51	$57	$63	$75
$39,001 - $48,000			$35	$40	$45	$51	$57
$48,001 - $52,000					$35	$40	$45

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$68	$68	$75	$83	$90	$113	$113
$28,001 - $39,000		$60	$68	$75	$83	$90	$113
$39,001 - $48,000			$52	$60	$68	$75	$83
$48,001 - $52,000					$52	$60	$68

***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.

- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups, developed the following recommendations:
  - Eliminating the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of $85.
  - Automatically qualify on-reserve First Nations households (~21,500 customers).

- The government intends to introduce legislation to create the First Nations On-Reserve Delivery Credit and to move forward in having its costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Establishing a New Affordability Fund

- The Affordability Fund would assist electricity customers who cannot qualify for low-income conservation programs and need financial assistance to undertake energy efficiency improvements.

- The Affordability Fund would provide LDCs with an additional tool to help customers in need. LDCs would use the Fund to provide support to customers for energy efficiency improvements to help reduce their future electricity bills.

- Measures supported by the Fund are expected to be similar to those available under the existing low-income conservation program, such as energy efficient lighting and appliances and, for electrically heated homes, insulation and weather stripping. Cold climate air source heat pumps would also be an eligible measure.

- The Province intends to work with Hydro One, in consultation with all other LDCs, to establish an independent Trust to serve as the administrator of the Affordability Fund.

- The Province would pay for the Fund through provincial revenues.

3. Enhancing Competitiveness for Small Manufacturers and Industrials

Enhancing Competitiveness for Small Manufacturers and Industrials

- The Industrial Conservation Initiative (ICI) provides a strong incentive for participating consumers to reduce their consumption during peak hours to reduce their costs.

- Expanding the eligibility threshold for the ICI would provide small manufacturers and industrials the opportunity to save on their electricity costs, while reducing the province's peak demand. The expanded ICI would include
  - Extending eligibility to small manufacturers and industrials with average monthly peak demand over 500 kilowatts; and
  - Targeting eligibility to energy intensive industries with the North American Industry Classification System (NAICS) codes 31 - 33 (i.e., Manufacturing).

- Under the expanded ICI, small manufacturers and industrials whose electricity demand is currently too low to qualify for ICI, would now be eligible for the expanded ICI if they wish to participate.

- Small manufacturers would also benefit from funding social programs through provincial revenues.

- In addition, the Ministry would assist small manufacturers and industrials' participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

4. Market Efficiencies / Bending the Cost Curve

Ongoing Efforts To Bend The Cost Curve of Ontario's Electricity System

- Since 2010, the government has taken a number of important actions to reduce electricity system costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.

Improving Electricity Sector Efficiency

The Ontario Energy Board (OEB)

- The Ontario Energy Board (OEB) regulates and licences more than 70 Local Distribution Companies (LDCs) in the province. The OEB would identify opportunities for cost efficiencies by:
  - Encouraging shared partnerships on services between utilities, which will help reduce costs and encourage further innovation for small to medium sized utilities;
  - Reviewing regulatory requirements to reduce “red tape” and eliminate unnecessary costs on LDCs; and
  - Looking at opportunities to further drive transmitter and LDC efficiencies and productivity improvements, including the use of innovative technologies and business processes.

Independent Electricity System Operator

- The IESO plans for the province’s electricity needs, balances the supply and demand for electricity in Ontario in real time and administers conservation programs.

- The IESO’s Market Renewal includes such initiatives as developing a capacity auction process, introducing a day-ahead energy market, etc.

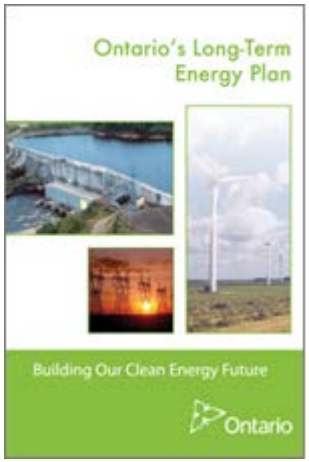
- Changes related to IESO’s Market Renewal initiatives are estimated to save at least $200 million per year, starting in 2021.

2017 Long-Term Energy Plan

- The Ministry of Energy is developing the next Long-Term Energy Plan (LTEP) after receiving feedback from the public, stakeholders and indigenous communities during the engagement process that took place from October to January 2017.

- The LTEP process is designed to be iterative and flexible and only commit resources as demand needs become clearer.

- The Ministry of Energy anticipates that the next LTEP will be published in spring 2017.



From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; "Gavin.He@ofina.on.ca"
Subject:	Fw: OFHP Update
Date:	Thursday, April 06, 2017 6:50:38 PM
Attachments:	Agenda_Weekly Rate Mitig Implmentation Group_Mar 6.docx Consolidated - OFHP Matrix - Week of April 3.docx FHP Policy Foundations 04 04 2017 v.3.docx

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From: Nelms, Scott (MOF)
Sent: Thursday, April 6, 2017 10:35 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: OFHP Update

Hi Dave,

Please see the following update (and attached materials) from this morning's rate mitigation meeting:

GA Financing

Legal Update

- Fair allocation plan (think of this as the line showing savings and costs to ratepayers associated with this program over time)
  - Province has set plan for deferrals for the first 4 years (25% and annual increases tied to inflation)
  - Need process (within pre-set parameters and input from OPG) to determine path for deferrals and recovery for subsequent years (5-30)
  - Originally viewed Province as taking a role in setting out this path
    - Feedback from market that Province should not be involved
  - Need to determine appropriate lead entity (e.g. OPG or IESO)
  - Need to be linked to life of underlying assets in order to mitigate constitutional risk
  - Consider 1-2 year refresh on the plan
  - Structure is still in flux
- Treasury Plan
  - OPG Trust sets this plan
  - Limited oversight in order to ensure OPG Trust can raise $ in the market at a reasonable cost
  - Must fit within the limits set by fair allocation plan (but can vary under the cost curve depending on market and interest rate realities)
  - Once specific bonds issued, fair allocation plan cannot override
- Role for OEB
  - Needs to be extremely limited in order to meet market requirements
  - However need to project consumer confidence
  - Options are currently under reivew
- Collectability is a key point that requires a number of provisions in legislation including
  - Irrevocable charges
  - Role of LDCs, IESO in collections

- Non-bypassability (exiting the electricity system / going off grid)
- Provincial back-stops
  - Springing guarantees that arise in the event Province takes certain actions that erode value to bondholders
  - Need to be limited and contingent in order to meet accounting tests
  - Dealers considering whether this needs to be in legislation or in a side agreement
  - Want to make sure that it is narrowly focused in terms of triggering events to cover only material impacts and avoid unintended consequences (investors taking legal action)
    - Over time as relevant policy changes are implemented, trustee may look to a 3rd party (e.g. opinion, ratings confirmation) to ensure that value of debt is not degraded
- If Province takes on any of the debt, need to determine what can happen from an accounting perspective. Situations to review:
  - Temporary freeze on borrowing markets
  - Permanent impairment of OPG's ability to purchase a portion of the asset from IESO (in this case may need a guarantee from the Province)
- Timeline for legislation
  - Pens down April 21
  - May 1st TB, LRC, Cab
  - May 4th introduction
  - Currently working from a Blakes document as a straw-person that would act as instructions to legislative counsel
  - Driving to timeline, very aggressive

OPG

- Special committee of the board met last week
  - RBC, CIBC, Goldman included
  - Discussed this is much larger than past models
  - Imperative that this structure follows past transaction models
  - Also reviewed stress scenarios (interest rates are most impactful)
- Shareholder letter
  - Providing to committee tomorrow and will share with government thereafter
- Reviewing sub-debt attributes
  - Certain characteristics needed in order to support senior debt financing (most notably will take on longevity risk)
    - Characteristics of the sub-debt would drive pricing (not tied to Province's cost of funds; likely to be higher interest rate)
  - At minimum, want to ensure that OPG's earnings are higher to offset incremental IOD to the Province

OEB

- Comfort letter from the Province is nearly ready, hopefully tomorrow
- Balancing amount of information needed

IESO

- Want to narrow issues to what is needed in legislation
- Regulatory asset
  - Speaking with KPMG today

- Meeting with ENE today to discuss business issues

Affordability Fund

- Advisory committee established to recommend final trustees
  - Will start mid-month deliberations
  - By May 31
  - 3 from LDCs and 2 from social services
- Hydro One is providing logistical support

Social programs (OESP, FN Rate, RRRP)

- Same timelines for approvals as GA
- Lots of details to sort through in regulation once legislation in place
- Give comfort to LDCs, IESO, Board in terms of what will be included in regulations in order for them to begin implementation
- Appearance on Energy Financials:
  - Will have flexibility to flow funds between programs while ensuring transparncy (4 line items but not executive control on each)
  - ENE could move $ between programs without TBS approval
- OESP: May 1 implementation of enhancements, OEB using up existing funds so no immediate draw on fiscal plan, working with social program ministries to assist with implementation, working with MoF / CRA to remove wet signature requirement
- RRRP: plan to have in place by July 1 for 8 utilities; retro-active start as safety valve if needed for utilities with more limited capacity to move quickly
- FN Rate: working to set up a meeting with COO to discuss options (for next week), Province does not want to be involved in choosing who is FN therefore plan to determine eligibility solely on the basis of geography

ICI

- Expanded to include greenhouses
- Need to meet 500kw threshold
- Were already eligible at 1MW; therefore, not many that aren't already been captured
- Seeking LRC regulatory approval April 10th
- Working with CME, OCC on outreach campaigns on benefits of ICI and other conservation initiatives

Bill Presentment

- Will not attempt to change the bill for July 1
  - If try to be more aggressive on changes to the bill may jeopardize implementation
- Want a larger re-work, look at all the constraints and regulations
  - For example, reconsider changing name of "delivery"
  - Timing: fall for re-design
- In the interim, want an insert that shows %

AG

- Walk through with ENE / MoF staff on April 19th
- TBS will share technical materials in advance

FAO

- Submitted materials last week
- Will circle back to determine status

Thanks,

Scott
Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
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w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 6, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB)
    - OPG Update
    - IESO Update
    - OEB Update

2) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

3) Bill Presentment (SNAP)

4) Update on Action Items / Policy Matrix

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of April 3, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		
• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation • Defining mitigation and recovery mechanism; and • Establishing roles for IESO, OPG and OEB • Regulation (amend O.Reg. 95/05) • Shareholder Resolution (work with OPG to determine form) • Third Party Technical Report re Long Lived Assets (TBD) • Accounting opinions from E&Y (OPG) and KPMG (IESO) • Financing: o How long will IESO hold short term liability (weeks/months); o When and how frequently will OPG purchase the asset from IESO; o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc); o OPG to confirm if it is considering more than one SPV/subsidiary; o OPG to explore tax considerations; o OPG to indicate how it would determine interest rate on sub-debt; and o OPG to provide amount/frequency of equity required and indicate trigger <u>Recent Action Items</u> **OPG:** • OPG to continue to work with lead banks / rating agencies / OFA on financing issues • OPG to confirm accounting if OFA were to act as lead order on borrowing • OPG to determine who will finance / hold the asset until it goes to the market	• IESO Board meeting on April 11, 2017 (TBD) – ESP to present on OFHP • AG briefing on April 19, 2017 (TBD) • Provide comfort level to allow OEB to include in May 2017 RPP • Approval dates: o TB/LRC on May 1 2017; and o Cabinet on May 3, 2017 • Legislation introduced May 4, 2017. o Opposition Briefing (TBD) • Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	• OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder resolution in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member **IESO:** • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to discuss LDC issues with OEB **OEB:** • OEB to continue to work with ENERGY to finalize draft comfort letter regarding May 1 – Regulated Price Plan (RPP) and OESP • OEB to draft RPP communique to be released publicly by April 20, 2017 **Legislative Drafting:** • LSB / Blakes will continue to work through legislative drafting issues • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature. • Legislative walk-through and working group meetings Monday and Tuesday • ENERGY / Blakes / IESO / OEB / OPG to meet on Tuesday to work through issues related to legislation • LSB / Blakes to brief OPCD on legislation • KPMG / E&Y to continue to be informed so that they can eventually confirm we've met all conditions • Blakes / OPG to work through financing issues related to 10% cap • Blakes / LSB to work with MAG on a second constitutional law	

Item	Key Deliverables / Considerations	Timing / Next Steps
	opinion from Peter Hogg • TD being engaged through OFA to provide financial advice • ESP to make presentation on GA financing at upcoming IESO Board meeting <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • SNAP/LSB working on LRC package for OESP enhancements • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • Board decision this week on removing OESP from bill as of May 1. • SNAP to work with TBS to ensure funds flow from fiscal plan as soon as legislation passes <u>Considerations</u> • OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts • Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to use OESP variance (approx. $100M) to reduce current OESP charge to zero and continue funding existing program until tax changes in place. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. <u>Considerations</u> • Legislative changes not required.	**April 7, 2017:** • Briefing for Advisory Committee members **April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) • ESP to consider implications of dropping below 500kw threshold due to investments in conservation <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

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• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information by March 24, 2017 • Ministry preparing responsive materials
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• ENERGY	• Ministry to begin work on bill presentment	• Initial discussion on March 31, 2017

Policy and Legal Foundations for the Proposed Ontario Fair Hydro Plan Act
April 4, 2017

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- Principles will link the benefit of the "Green Generation Initiative" with the regulatory cost that future rate payers will pay
- Need to name and articulate "Green Generation Initiative"

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- Policy direction around intergenerational funding will be established by the Minister of Energy
- The Fair Allocation Plan has been determined for the 1st four years, as set out in the March 2nd announcement
- Should there be a process around the Fair Allocation Plan [or as necessary]?
- [Role for the OEB?]

Treasury Plan

- Created by OPG to implement the Fair Allocation Plan
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- 3 components:
    - Treasury Plan must be compliant with principles and parameters of the Fair Allocation Plan;
    - The Plan must match maturities to allocations under the Fair Allocation Plan, as well as achieve funding efficiencies and cost management articulated in the Fair Allocation Plan; and
    - Implementation
- Should [Minister?] [OEB?] review [and approve?] the Treasury Plan? At what point in process?

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- Right to recover from rate payers, through collection by LDCs and IESO, the regulatory charge, late fees, interest established by legislation
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- Clearly defined class of rate payers that receive and pay for the benefit
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- [Inspect books and records?]

DRAFT

- [Approve administrative costs?]
- [Prudence review of financing costs?]
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    - Ability to review
    - Ability to review and make recommendations (non-binding)
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Provincial Guarantee

- Scope / Triggers / Consequences / Form

DRAFT

From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; "Gavin.He@ofina.on.ca"
Subject:	Fw: OFHP Update
Date:	Thursday, April 06, 2017 6:50:38 PM
Attachments:	Agenda_Weekly Rate Mitig Implmentation Group_Mar 6.docx Consolidated - OFHP Matrix - Week of April 3.docx FHP Policy Foundations 04 04 2017 v.3.docx

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From: Nelms, Scott (MOF)
Sent: Thursday, April 6, 2017 10:35 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: OFHP Update

Hi Dave,

Please see the following update (and attached materials) from this morning's rate mitigation meeting:

GA Financing

Legal Update

- Fair allocation plan (think of this as the line showing savings and costs to ratepayers associated with this program over time)
  - Province has set plan for deferrals for the first 4 years (25% and annual increases tied to inflation)
  - Need process (within pre-set parameters and input from OPG) to determine path for deferrals and recovery for subsequent years (5-30)
  - Originally viewed Province as taking a role in setting out this path
    - Feedback from market that Province should not be involved
  - Need to determine appropriate lead entity (e.g. OPG or IESO)
  - Need to be linked to life of underlying assets in order to mitigate constitutional risk
  - Consider 1-2 year refresh on the plan
  - Structure is still in flux
- Treasury Plan
  - OPG Trust sets this plan
  - Limited oversight in order to ensure OPG Trust can raise $ in the market at a reasonable cost
  - Must fit within the limits set by fair allocation plan (but can vary under the cost curve depending on market and interest rate realities)
  - Once specific bonds issued, fair allocation plan cannot override
- Role for OEB
  - Needs to be extremely limited in order to meet market requirements
  - However need to project consumer confidence
  - Options are currently under reivew
- Collectability is a key point that requires a number of provisions in legislation including
  - Irrevocable charges
  - Role of LDCs, IESO in collections

- Non-bypassability (exiting the electricity system / going off grid)
- Provincial back-stops
  - Springing guarantees that arise in the event Province takes certain actions that erode value to bondholders
  - Need to be limited and contingent in order to meet accounting tests
  - Dealers considering whether this needs to be in legislation or in a side agreement
  - Want to make sure that it is narrowly focused in terms of triggering events to cover only material impacts and avoid unintended consequences (investors taking legal action)
    - Over time as relevant policy changes are implemented, trustee may look to a 3rd party (e.g. opinion, ratings confirmation) to ensure that value of debt is not degraded
- If Province takes on any of the debt, need to determine what can happen from an accounting perspective. Situations to review:
  - Temporary freeze on borrowing markets
  - Permanent impairment of OPG's ability to purchase a portion of the asset from IESO (in this case may need a guarantee from the Province)
- Timeline for legislation
  - Pens down April 21
  - May 1st TB, LRC, Cab
  - May 4th introduction
  - Currently working from a Blakes document as a straw-person that would act as instructions to legislative counsel
  - Driving to timeline, very aggressive

OPG

- Special committee of the board met last week
  - RBC, CIBC, Goldman included
  - Discussed this is much larger than past models
  - Imperative that this structure follows past transaction models
  - Also reviewed stress scenarios (interest rates are most impactful)
- Shareholder letter
  - Providing to committee tomorrow and will share with government thereafter
- Reviewing sub-debt attributes
  - Certain characteristics needed in order to support senior debt financing (most notably will take on longevity risk)
    - Characteristics of the sub-debt would drive pricing (not tied to Province's cost of funds; likely to be higher interest rate)
  - At minimum, want to ensure that OPG's earnings are higher to offset incremental IOD to the Province

OEB

- Comfort letter from the Province is nearly ready, hopefully tomorrow
- Balancing amount of information needed

IESO

- Want to narrow issues to what is needed in legislation
- Regulatory asset
  - Speaking with KPMG today

- Meeting with ENE today to discuss business issues

Affordability Fund

- Advisory committee established to recommend final trustees
  - Will start mid-month deliberations
  - By May 31
  - 3 from LDCs and 2 from social services
- Hydro One is providing logistical support

Social programs (OESP, FN Rate, RRRP)

- Same timelines for approvals as GA
- Lots of details to sort through in regulation once legislation in place
- Give comfort to LDCs, IESO, Board in terms of what will be included in regulations in order for them to begin implementation
- Appearance on Energy Financials:
  - Will have flexibility to flow funds between programs while ensuring transparncy (4 line items but not executive control on each)
  - ENE could move $ between programs without TBS approval
- OESP: May 1 implementation of enhancements, OEB using up existing funds so no immediate draw on fiscal plan, working with social program ministries to assist with implementation, working with MoF / CRA to remove wet signature requirement
- RRRP: plan to have in place by July 1 for 8 utilities; retro-active start as safety valve if needed for utilities with more limited capacity to move quickly
- FN Rate: working to set up a meeting with COO to discuss options (for next week), Province does not want to be involved in choosing who is FN therefore plan to determine eligibility solely on the basis of geography

ICI

- Expanded to include greenhouses
- Need to meet 500kw threshold
- Were already eligible at 1MW; therefore, not many that aren't already been captured
- Seeking LRC regulatory approval April 10th
- Working with CME, OCC on outreach campaigns on benefits of ICI and other conservation initiatives

Bill Presentment

- Will not attempt to change the bill for July 1
  - If try to be more aggressive on changes to the bill may jeopardize implementation
- Want a larger re-work, look at all the constraints and regulations
  - For example, reconsider changing name of "delivery"
  - Timing: fall for re-design
- In the interim, want an insert that shows %

AG

- Walk through with ENE / MoF staff on April 19th
- TBS will share technical materials in advance

FAO

- Submitted materials last week
- Will circle back to determine status

Thanks,

Scott
Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 6, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB)
    - OPG Update
    - IESO Update
    - OEB Update

2) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

3) Bill Presentment (SNAP)

4) Update on Action Items / Policy Matrix

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of April 3, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		
• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation • Defining mitigation and recovery mechanism; and • Establishing roles for IESO, OPG and OEB • Regulation (amend O.Reg. 95/05) • Shareholder Resolution (work with OPG to determine form) • Third Party Technical Report re Long Lived Assets (TBD) • Accounting opinions from E&Y (OPG) and KPMG (IESO) • Financing: o How long will IESO hold short term liability (weeks/months); o When and how frequently will OPG purchase the asset from IESO; o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc); o OPG to confirm if it is considering more than one SPV/subsidiary; o OPG to explore tax considerations; o OPG to indicate how it would determine interest rate on sub-debt; and o OPG to provide amount/frequency of equity required and indicate trigger <u>Recent Action Items</u> **OPG:** • OPG to continue to work with lead banks / rating agencies / OFA on financing issues • OPG to confirm accounting if OFA were to act as lead order on borrowing • OPG to determine who will finance / hold the asset until it goes to the market	• IESO Board meeting on April 11, 2017 (TBD) – ESP to present on OFHP • AG briefing on April 19, 2017 (TBD) • Provide comfort level to allow OEB to include in May 2017 RPP • Approval dates: o TB/LRC on May 1 2017; and o Cabinet on May 3, 2017 • Legislation introduced May 4, 2017. o Opposition Briefing (TBD) • Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	• OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder resolution in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member **IESO:** • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to discuss LDC issues with OEB **OEB:** • OEB to continue to work with ENERGY to finalize draft comfort letter regarding May 1 – Regulated Price Plan (RPP) and OESP • OEB to draft RPP communique to be released publicly by April 20, 2017 **Legislative Drafting:** • LSB / Blakes will continue to work through legislative drafting issues • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature. • Legislative walk-through and working group meetings Monday and Tuesday • ENERGY / Blakes / IESO / OEB / OPG to meet on Tuesday to work through issues related to legislation • LSB / Blakes to brief OPCD on legislation • KPMG / E&Y to continue to be informed so that they can eventually confirm we've met all conditions • Blakes / OPG to work through financing issues related to 10% cap • Blakes / LSB to work with MAG on a second constitutional law	

Item	Key Deliverables / Considerations	Timing / Next Steps
	opinion from Peter Hogg • TD being engaged through OFA to provide financial advice • ESP to make presentation on GA financing at upcoming IESO Board meeting <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • SNAP/LSB working on LRC package for OESP enhancements • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • Board decision this week on removing OESP from bill as of May 1. • SNAP to work with TBS to ensure funds flow from fiscal plan as soon as legislation passes <u>Considerations</u> • OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts • Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to use OESP variance (approx. $100M) to reduce current OESP charge to zero and continue funding existing program until tax changes in place. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. <u>Considerations</u> • Legislative changes not required.	**April 7, 2017:** • Briefing for Advisory Committee members **April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) • ESP to consider implications of dropping below 500kw threshold due to investments in conservation <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

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8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
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- Scope / Triggers / Consequences / Form

DRAFT

From: Gadi Mayman
To: Mike Manning; Ken Kandeepan; Ronald Kwan
Cc: Christina Zhang
Subject: Fw: OPG Trust
Date: Thursday, March 16, 2017 9:58:11 AM

Surprise, surprise. Ken have you had a chance to get Cindy's views on this? It'd be nice to know what she thinks before I hear back from Ken H as to why they don't think it works.

Thanks,
Gadi

Original Message
From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca>
Sent: Thursday, March 16, 2017 9:04 AM
To: Gadi Mayman
Subject: OPG Trust

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Serge

Sent from my iPad

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From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Gavin He; Anna Strathy
Subject: Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date: Thursday, April 20, 2017 3:39:49 PM
Attachments: Action Items April 20.docx

From: Katona, Keley (ENERGY)
Sent: Thursday, April 20, 2017 3:08 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY); Andrew Teliszewsky (ENERGY); Matt Whittington (ENERGY); Baker, Carys (ENERGY); Kyle MacIntyre (MOF); David McLean (MOF); Robert Foster (MOF); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: RE: Rate Mitigation Implementation Meeting - April 20, 2017

Attached are the action items from today's meeting.

From: Katona, Keley (ENERGY)
Sent: April-19-17 5:11 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); ''jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com)'; 'HARTWICK Ken -FINANCE (ken.hartwick@opg.com)'; 'Rosemaire Leclair'; 'Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca)'; 'Campbell, Bruce (bruce.campbell@ieso.ca)'; 'Kim Marshall (Kim.Marshall@ieso.ca)'; Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); 'LEE John -TREASURY'
Cc: Imbrogno, Serge (ENERGY); Teliszewsky, Andrew (ENERGY); Whittington, Matt (ENERGY); Baker, Carys (ENERGY); MacIntyre, Kyle (TBS); McLean, David (MOF); Foster, Robert (CAB); 'jordan.penic@ieso.ca'; 'sarah.branco@ontarioenergyboard.ca'; 'Turnevicius, Lorraine'; 'catriona.king@opg.com'; Bungaro-Yemec, Francesca (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Good afternoon,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

Action Items – April 20, 2017

GA Refinancing

- LSB / Blakes to turn around revised document today with comments due by end of day Sunday
- IESO / OPG to work together on outstanding issue regarding OPG cash flows
- OPG to draft terms of guarantee to dealers which will be presented to dealers
- MOF (IGS) to work through equity injection mechanics and will report back next week
- IESO to work with KPMG on IESO recovery mechanism
- Pens down on refinancing legislation April 28

Other OFHP Initiatives

- Pens down on social program legislation April 28
- ENERGY working with MCSS on automatic enrolment
- ENERGY meeting with COO next week on FN rate
- ENERGY / MOF / OEB / ICF discussions with CRA ongoing on wet signature
- Affordability Fund advisory committee met this week and reached consensus on three LDCs + two social agencies to be represented on Trust Board (Ottawa Carlton UW / Advocacy Centre for Tenants Ontario / Thunder Bay Hydro / Hydro One / Alectra)
- ENERGY continues to work with OCC / CME on targeted outreach regarding energy programs for business, including ICI

Other Items

- ENERGY drafting TB / LRC submissions as well as presentation to Cabinet – May 9, 10

From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: Fw: Rate Mitigation Implementation Meeting - April 6, 2017
Date: Wednesday, April 05, 2017 5:22:26 PM
Attachments: Agenda_Weekly Rate Mitig Implmentation Group_Mar 6.docx
Consolidated - OFHP Matrix - Week of April 3.docx
FHP Policy Foundations 04 04 2017 v.3.docx

From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
Sent: Wednesday, April 5, 2017 5:09 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY); Andrew Teliszewsky (ENERGY); Matt Whittington (ENERGY); Baker, Carys (ENERGY); Kyle MacIntyre (MOF); David McLean (MOF); Robert Foster (MOF); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 6, 2017

Good evening,
Please find attached material for tomorrow's meeting.
Keley

Keley Katona | Director of Operations
Deputy Minister’s Office | Ministry of Energy
Tel: 416-326-7688 | BB: 647-980-4634
E-mail: Keley.Katona@Ontario.ca<mailto:Keley.Katona@Ontario.ca>
4th Floor, Hearst Block, 900 Bay Street

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 6, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB)
    - OPG Update
    - IESO Update
    - OEB Update

2) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

3) Bill Presentment (SNAP)

4) Update on Action Items / Policy Matrix

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of April 3, 2017

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• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation • Defining mitigation and recovery mechanism; and • Establishing roles for IESO, OPG and OEB • Regulation (amend O.Reg. 95/05) • Shareholder Resolution (work with OPG to determine form) • Third Party Technical Report re Long Lived Assets (TBD) • Accounting opinions from E&Y (OPG) and KPMG (IESO) • Financing: o How long will IESO hold short term liability (weeks/months); o When and how frequently will OPG purchase the asset from IESO; o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc); o OPG to confirm if it is considering more than one SPV/subsidiary; o OPG to explore tax considerations; o OPG to indicate how it would determine interest rate on sub-debt; and o OPG to provide amount/frequency of equity required and indicate trigger <u>Recent Action Items</u> **OPG:** • OPG to continue to work with lead banks / rating agencies / OFA on financing issues • OPG to confirm accounting if OFA were to act as lead order on borrowing • OPG to determine who will finance / hold the asset until it goes to the market	• IESO Board meeting on April 11, 2017 (TBD) – ESP to present on OFHP • AG briefing on April 19, 2017 (TBD) • Provide comfort level to allow OEB to include in May 2017 RPP • Approval dates: o TB/LRC on May 1 2017; and o Cabinet on May 3, 2017 • Legislation introduced May 4, 2017. o Opposition Briefing (TBD) • Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

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2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

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• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • SNAP/LSB working on LRC package for OESP enhancements • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • Board decision this week on removing OESP from bill as of May 1. • SNAP to work with TBS to ensure funds flow from fiscal plan as soon as legislation passes <u>Considerations</u> • OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts • Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to use OESP variance (approx. $100M) to reduce current OESP charge to zero and continue funding existing program until tax changes in place. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

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4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
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• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. <u>Considerations</u> • Legislative changes not required.	**April 7, 2017:** • Briefing for Advisory Committee members **April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) • ESP to consider implications of dropping below 500kw threshold due to investments in conservation <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

Item	Key Deliverables / Considerations	Timing / Next Steps
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information by March 24, 2017 • Ministry preparing responsive materials
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP	• Preliminary discussion on April 19, 2017 (TBD)
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment	• Initial discussion on March 31, 2017

Policy and Legal Foundations for the Proposed Ontario Fair Hydro Plan Act
April 4, 2017

Creating the Regulatory Framework

- Principles will link the benefit of the "Green Generation Initiative" with the regulatory cost that future rate payers will pay
- Need to name and articulate "Green Generation Initiative"

Fair Allocation Plan

- Policy direction around intergenerational funding will be established by the Minister of Energy
- The Fair Allocation Plan has been determined for the 1st four years, as set out in the March 2nd announcement
- Should there be a process around the Fair Allocation Plan [or as necessary]?
- [Role for the OEB?]

Treasury Plan

- Created by OPG to implement the Fair Allocation Plan
- Will pass through actual costs and expenses of funding obligations incurred
- 3 components:
    - Treasury Plan must be compliant with principles and parameters of the Fair Allocation Plan;
    - The Plan must match maturities to allocations under the Fair Allocation Plan, as well as achieve funding efficiencies and cost management articulated in the Fair Allocation Plan; and
    - Implementation
- Should [Minister?] [OEB?] review [and approve?] the Treasury Plan? At what point in process?

Establishment of the Regulatory Asset

- Right to recover from rate payers, through collection by LDCs and IESO, the regulatory charge, late fees, interest established by legislation
- IESO may dispose of (by assignment, transfer, sale, etc.) its right, title and interest in the Regulatory Asset
- Legislation will create property rights and allow for security interests in the Regulatory Asset
- [Role of the OEB in establishing the Regulatory Asset?]
- Role of OPG in acquiring the asset?

Ensuring Collectability

- Clearly defined class of rate payers that receive and pay for the benefit
- Charges are irrevocable
- LDCs have duty to invoice rate payers for the charge
- IESO and LDCs have duty to collect charges as agent and pay remittances to IESO
- IESO has duty to pay remittances to the Regulatory Asset Owner
- Non-by-passability – subject rate payers who opt to go off grid to a penalty (prepayment)?
- True up mechanism to reconcile collections with incurrences
- Province shall not take steps to reduce, alter, impair or terminate the Regulatory Asset or collection

OEB Role

- [Inspect books and records?]

DRAFT

- [Approve administrative costs?]
- [Prudence review of financing costs?]
- [Consequences of OEB review?]
    - Ability to review
    - Ability to review and make recommendations (non-binding)
    - Review and approve or refer back for reconsideration (binding)

Provincial Guarantee

- Scope / Triggers / Consequences / Form

DRAFT

From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: Fw: Rate Mitigation Implementation Meeting - April 6, 2017
Date: Wednesday, April 05, 2017 5:22:26 PM
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To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
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WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
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• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

Item	Key Deliverables / Considerations	Timing / Next Steps
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information by March 24, 2017 • Ministry preparing responsive materials
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP	• Preliminary discussion on April 19, 2017 (TBD)
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment	• Initial discussion on March 31, 2017

Policy and Legal Foundations for the Proposed Ontario Fair Hydro Plan Act
April 4, 2017

Creating the Regulatory Framework

- Principles will link the benefit of the "Green Generation Initiative" with the regulatory cost that future rate payers will pay
- Need to name and articulate "Green Generation Initiative"

Fair Allocation Plan

- Policy direction around intergenerational funding will be established by the Minister of Energy
- The Fair Allocation Plan has been determined for the 1st four years, as set out in the March 2nd announcement
- Should there be a process around the Fair Allocation Plan [or as necessary]?
- [Role for the OEB?]

Treasury Plan

- Created by OPG to implement the Fair Allocation Plan
- Will pass through actual costs and expenses of funding obligations incurred
- 3 components:
    - Treasury Plan must be compliant with principles and parameters of the Fair Allocation Plan;
    - The Plan must match maturities to allocations under the Fair Allocation Plan, as well as achieve funding efficiencies and cost management articulated in the Fair Allocation Plan; and
    - Implementation
- Should [Minister?] [OEB?] review [and approve?] the Treasury Plan? At what point in process?

Establishment of the Regulatory Asset

- Right to recover from rate payers, through collection by LDCs and IESO, the regulatory charge, late fees, interest established by legislation
- IESO may dispose of (by assignment, transfer, sale, etc.) its right, title and interest in the Regulatory Asset
- Legislation will create property rights and allow for security interests in the Regulatory Asset
- [Role of the OEB in establishing the Regulatory Asset?]
- Role of OPG in acquiring the asset?

Ensuring Collectability

- Clearly defined class of rate payers that receive and pay for the benefit
- Charges are irrevocable
- LDCs have duty to invoice rate payers for the charge
- IESO and LDCs have duty to collect charges as agent and pay remittances to IESO
- IESO has duty to pay remittances to the Regulatory Asset Owner
- Non-by-passability – subject rate payers who opt to go off grid to a penalty (prepayment)?
- True up mechanism to reconcile collections with incurrences
- Province shall not take steps to reduce, alter, impair or terminate the Regulatory Asset or collection

OEB Role

- [Inspect books and records?]

DRAFT

- [Approve administrative costs?]
- [Prudence review of financing costs?]
- [Consequences of OEB review?]
    - Ability to review
    - Ability to review and make recommendations (non-binding)
    - Review and approve or refer back for reconsideration (binding)

Provincial Guarantee

- Scope / Triggers / Consequences / Form

DRAFT

From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Thursday, April 20, 2017 1:40:04 PM
Attachments:	the-economic-cost-of-electricity-generation-in-ontario-april-2017.pdf

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From: Nelms, Scott (MOF)
Sent: Thursday, April 20, 2017 11:51 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Hi Dave,

Here is my next installment of Thursday OFHP. Note that I have attached a report from IVEY, referenced later in the document.

- AG discussion (Yesterday):
  - ENE Lead, walked through the March technical briefing presentation
  - TBS DM suggested that this was the first of several meetings and considers this to be a high level, first pass
    - Lots of moving pieces where the Province does not yet have clarity
    - Will take back questions and will respond once it has more certainty on structure
  - The AG and staff had the following questions:
    - Legislative precedent of shifting ratebase to tax base, and can the tax base support these additional charges?
    - Why use trust mechanism for Affordability Fund, and should the Trust be consolidated?
    - Seeking more details on the accounting for the OFHP and wanted reports to justify what is set out in the Budget
    - Also seeking independent studies to back up 30 year contracts (ENE referenced Ivey report)?
    - Asking about mechanics of the OPG Trust, OEFC lending etc.?
    - What was used to brief the FAO?
- Legal Update
  - Timing Update
    - Pens down now on the 28th
    - May 9th TB
    - May 10th Cab
    - May 11th introduction
  - Latest large legal discussion took place on Monday
    - This was the first run through of legislation draft (up to that point discussions focused on turns of instructions to leg. counsel)
  - Current Status
    - Turning a new draft today
    - Trying to find balance and working through all the wording from various parties

(some of which is inconsistent)
- Received very detailed feedback from OPG / Torys and others
- In all-night drafting stages
- Trying to balance stakeholder consultation time and drafting time

- Tension between enabling the transaction in legislation and embedding the transaction in legislation
  - Determining how many questions need to be answered now and what can be pushed to regulation / commercial agreements
  - Legislation will include indications to regulations, but will not have all filled in
  - Difficult because American examples embed transaction in legislation
- At least one more turn of legislation
  - If comments quickly, may be able to turn more than once
  - Seeking comments by no later than Sunday
- Business Issues
  - Guarantees
    - General powers to be enabled in legislation and details will flow in regulations / commercial arrangements
    - MoF / TBS suggests Minister of Finance should have power to provide guarantees under FAA
    - First ask from dealers included several elements that would likely not be palatable to the Province
      - For example, a make-whole penalty which creates a very expensive break fee
    - OPG and OFA to develop a set of proposed guarantees, rather than negotiating with dealers
  - OPG requires cash flows immediately (interest payments starting on Day 1)
    - Need to meet this objective while meeting the Province's commitment to reduce rates by 25% and maintain increases at inflation for next 4 years
    - Without these payments there would be an adverse effect on credit metrics, and earnings (fiscal)
    - Response:
      - IESO will pay interest costs to OPG Trust on an ongoing basis, funded through its line of credit, resulting in a larger deferral
      - OPG Trust would then purchase the deferral from IESO (consistent with mechanism already being contemplated)
      - Need to determine accounting impact to IESO, KPMG's preliminary view is that this will work
  - Should Province / OPG be targeting AAA rating and what is the impact of Provincial guarantees?
    - Interaction with required Provincial guarantees
      - Fed example of Muskrat Falls, no make-whole, convert to Canada bonds, still trades 80 bps back from Canada
    - Regardless of rating, will trade back from Ontario
    - S&P tends to focus on back-stop more so than Moody's, DBRS, so may have a split rating

- S&P more focus for US investors so may not be as relevant if Canadian focus initially
- AAA rating helps for securitizations and important to aim as high as possible given unique structure (needed in order to attract those investors
- Important target, but need to avoid setting up potential expense of $100s of millions in break fees

- Approvals for equity injections
  - Need to have appropriation approvals in TB sub
  - Focus on an annual approvals process, followed by a streamlined monthly flow of funds
  - EIGS (me) to work through this with OFA, OPG and TBS and report back
- Con Law issue
  - Navigant engaged by ENE and working through an analysis of the underlying life of assets
  - Lawyers working on reverse engineering legislation to ensure it is constitutionally sound

- OPG Update
  - Special Board committee yesterday to briefing on status of legislation
  - Formal approval May 5th from Board
  - Accounting letters now working through process (E&Y letterhead, they are in agreement)
  - Credit Rating process
    - Will approach rating agencies post-regulations, with a framework for commercial agreements
    - OPG anticipates ~1 month to receive preliminary view from rating agency
    - And a few additional weeks to finalize
    - Final rating will come once contractual arrangements are in place
  - OPG working with IESO on operations and framework of how the purchase and sale agreement will work
    - Iterative process starting now
    - Will need to move as legislation / regulation develops
- IESO Update
  - Discussions with OFA on enhanced LoC underway
  - Accounting opinion in development
    - Main focus on risk to IESO in event OPG in future does not purchase the asset (need recoverability from ratepayers without taking away from rights of the Trust); dealers do not want to keep layering on additional charges to ratepayers
      - Ok if Province owns separate cash flow, but not so comfortable if IESO then sells to a separate financing entity (worried about prioritization)
      - Can the Province backstop without a fiscal hit on the entire transaction structure
  - IESO IT Audit
    - May be looking into Market Surveillance Panel functions
    - Meeting Tuesday afternoon with AG on the OFHP (plan to state this is still in process)

- OEB
    - Today the RPP for May will be announced
        - Taking into account all elements of the Fair Hydro Plan that seemed prudent to include
        - OEB seemed to suggest 50% now and remaining 50% dependent on legislation implemented so anticipate a further change to rates on July 1
    - Need more details on OEB's anticipated role in setting up regulatory assets

Social Programs

- RRRP
    - Meeting of LDCs earlier in the week (43 attended)
    - ENE provided update on activities underway
    - Re-enforced need for updates to systems by July 1, and LDCs were receptive
    - Discussed bill presentment and LDCs were comforted that only limited changes needed now, more extensive changes in the fall
- OESP
    - Working through legislative changes in support of this initiative
    - MCSS and ENE working to get to automatic enrollment, and appear to have a path
    - Discussions with CRA underway, received message that this is a priority to remove wet signature requirement
- FN rate
    - ENE sitting down next week (Wed) to discuss operationalizing credit with COO
- Affordability Fund
    - Advisory committee met on Tuesday
        - Consensus on selection of Trust representatives
            - Hydro One, Alectra, Thunder Bay Hydro
            - Ottawa-Carleton United Way, Advocacy Centre for Tenants of Ontario
        - Will follow up on specific representatives from those organizations
        - Given AG questions, important to move on this as quickly as possible

ICI

- Shifted beyond approvals
- Working with OCE and CME on outreach campaigns
    - Asked to participate in next AGM of OCE to provide overview of ICI
- Also coordinating with LDCs to advise them of changes

Other Updates

- TB May 9th
    - Will include social programs
    - GA smoothing legislation
    - Appropriation approval for equity injection
- IVEY Energy Centre released a report that walked through the merits of GA Smoothing (attached)
- Will re-schedule the next meeting for Tuesday, recognizing budget release date is next Thursday

IVEY Business School
WESTERN UNIVERSITY · CANADA
Energy Policy and Management Centre

Policy Brief
April 2017

The Economic Cost of Electricity Generation in Ontario

EXECUTIVE SUMMARY

- The overall cost of electricity generation, which accounts for almost two-thirds of Ontario's total system costs, has increased significantly since 2005 mainly due to a substitution away from coal generation towards more costly renewable sources, and a parallel increase in the total amount of installed capacity in the province, notably due to an expansion in the amount of natural gas capacity.
- The unit cost of electricity generation is approximated by the sum of the wholesale market price and the Global Adjustment. Wholesale market prices reflect, in part, short-run variable costs, but often fall short of the total cost of producing electricity, which includes significant fixed capital costs. The Global Adjustment is a mechanism that, in conjunction with the wholesale hourly market price, ensures recovery of variable and fixed generation costs. As such, the Global Adjustment is not an overpayment but a component of the full economic cost of generating electricity.
- Recent increases in consumers' electricity bills have been driven in part by the rapid expansion of generation capacity in the province, much of which has been financed under 20 year contracts with private firms. Current rates and electricity bills could be reduced by amortizing contracted generation capital costs over longer periods to match the productive lifespans of the assets, often longer than the contracted terms. The cost of generation charged on consumer bills would then more closely reflect the economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term.

INTRODUCTION

This report brings an economic perspective to the analysis of electricity generation costs and prices in Ontario. Generation accounts for approximately two-thirds of Ontario's total electricity system costs, making consumers' electricity bills particularly sensitive to changes in generation policies and the cost of ensuring that sufficient generation capacity is available to meet demand. In Ontario, the wholesale price of electricity generation has declined since 2006, yet regulated rates for household consumers have almost doubled, creating confusion over the reasons why bills have increased. While a comprehensive analysis of electricity system costs and consumer bills is outside the scope, this report provides an economic cost analysis of the generation component of electricity bills, which can reconcile these seemingly contradictory trends. An important insight, which comes from the experiences

of jurisdictions that have deregulated their power generation sectors, is that wholesale generation markets are often distorted by the effects of administrative restrictions on market operations and by parallel long-term contracting policies, undermining the signals that market prices would otherwise provide for efficient generation production, investment, and consumption decisions. In such markets, wholesale market prices are shaped in part by strategic bidding behaviour of generators, and need not accurately reflect underlying average or marginal costs of generation. Consequently, a complete account of the cost of generation, and its pricing, requires a broad analysis that incorporates a range of generation sector policies.

WHOLESALE ELECTRICITY MARKETS AND INVESTMENT IN GENERATION CAPACITY

In competitive markets with many buyers and sellers, homogenous products and firms, and unrestricted exit and entry, market prices send crucial signals to firms and consumers, and help balance demand with supply. Importantly, these conditions create a close relationship between prices and costs since competitive pressures push prices to the marginal cost of production. External shocks to demand or supply that shift prices will cause firms to enter or exit the market, moving prices to long-run average cost levels over time. For example, an increase in demand that increases prices will encourage new firms to enter the market, subsequently exerting downward pressure on prices. In the long-run, market prices enable firms to recover both fixed and variable costs, and to earn a normal rate of return on capital invested. Hence, in competitive markets, prices are an indicator of the long-run cost of producing goods and services.

Wholesale electricity generation markets, however, generally do not conform to the ideal of an unfettered competitive market (Borenstein, 2016). The distinctive characteristics of electricity markets are many and well known. Electricity is not storable in large quantities so production must match extant demand. Renewable power sources are intermittent, necessitating complementary investment in dispatchable generation capacity that may have low utilization rates. Transmission and distribution are subject to congestion, creating conditions for oligopoly or even monopoly pricing. Demand is highly price-inelastic in the short-term for many consumers, implying consumers are willing to pay high prices for electricity. Variable costs of production are small relative to high fixed costs, especially for renewable power sources, meaning variable costs can be significantly lower than average costs. Renewable power, which governments have encouraged for environmental reasons, often has higher average unit costs than fossil fuels, often requiring additional policy instruments to support private investment. Entry by new generators is highly regulated, and it can take many years for permitting and construction to be completed, leading to extended periods of under- or over-supply of capacity. Under such conditions, wholesale electricity market prices can diverge from average costs for long durations, creating an uncertain investment environment for generators. Two risks are particularly germane:

First, small shocks to demand or supply can lead to rapid escalation in wholesale market prices given short-run price-inelasticity of demand and supply. For instance, in Ontario during September 2002, even though the average price over the month was $83/MWh, it peaked at $1028/MWh, more than twelve times the average. Price spikes reflect scarcity and are a feature, not a flaw, of a well-functioning market. However, dramatic price spikes often create consumer pressure on governments to intervene and reduce volatility by implementing caps. In Alberta, the government capped wholesale market prices at $1000/MWh (Brown and Olmstead, forthcoming). Ontario's maximum wholesale market price is set at $2000/MWh.

One consequence of such intervention is that it can create a "missing money problem" for generators. As one electricity market expert noted, "The missing money problem arises when occasional market price increases are limited by administrative actions such as price caps. By preventing prices from reaching high levels during times of relative scarcity, these administrative actions reduce the payments that could be applied towards the fixed operating costs of existing generation plants and the investment costs of new plants" (Hogan, 2005, pg.1). By limiting the opportunities for generators to recover fixed costs, price caps can act as a disincentive for generators to invest in new capacity.

A second risk for generators is that if markets develop excess generation capacity, wholesale prices will be pushed down towards variable costs, preventing generators from recovering fixed investment costs, which can be large given the capital-intensive nature of electricity production (Borenstein, 2002). Anticipating that future market conditions could change, generators may be unwilling to invest in new capacity—even if current levels are not fully sufficient to meet demand—when costs can only be recouped through wholesale market revenues. Such risks are magnified in institutional environments where government entities can rapidly implement sweeping regulation or policy changes, as in parliamentary systems with majority party control.

For these and other reasons, wholesale electricity market prices often do not send accurate signals to producers or consumers regarding efficient production and consumption behaviour, nor need they create the competitive incentives for generators to make sufficient long term investments in capacity for reliable supply within a jurisdiction, especially in generation technologies that have high average costs relative to variable costs (e.g. renewable fuels) or that have very long payback periods (e.g. nuclear power). This means that governments, even in deregulated markets, often rely on complementary policy mechanisms to enable generators to recover their fixed costs of electricity generation and to remain in the market. Long-run power purchase contracting, which effectively mimics average cost pricing, has been a common approach in many jurisdictions, as have been separate capacity markets (Biggar and Hesamzadeh, 2014). Invariably, however, additional policy instruments do not operate independently but have spillover effects on generator incentives, introducing further complexities and distortions in the operation of wholesale markets.

ONTARIO'S GENERATION SECTOR AND WHOLESALE MARKET

Background

Over the last half century, several structural shifts have fundamentally changed the nature and cost profile of Ontario's electricity generation sector. Major nuclear generating capacity was brought online during the 1960s to 1980s, transforming baseload generation in the province. Construction costs proved to be significantly greater than expected, however, leading to rate increases of more than 30% in the early 1990s, shortly followed by a rate-freeze imposed by a new (NDP) government in 1993 (Trebilcock and Hrab, 2005).[1]

The second structural change occurred in the late 1990s and early 2000s when the province, in concert with many other jurisdictions that were seeking greater electricity sector efficiencies, experimented with market deregulation and restructuring. In May 2002, the Progressive Conservative government launched a competitive wholesale

[1] The rate freeze remained in place until the Government launched the competitive retail market in 2002.

electricity market and a short-lived competitive retail market. Hot summer temperatures combined with a shortage of generation capacity triggered wholesale price spikes and rapid increases in consumer bills (Trebilcock and Hrab, 2005, pg. 126). Yielding to public pressure to reduce 'rate shock', the government quickly reversed course, closing the retail market in November 2002, implementing a rate freeze, and shelving plans for privatization and restructuring of state-owned generation assets. The government retained the wholesale market with the expectation that it would encourage private investment in new generation capacity.

The third structural shift began in the mid-2000s under a newly-elected Liberal government that sought to rebuild the supply portfolio to address a generation shortfall, and also to rebalance the supply mix, notably by reducing the share of coal generation while phasing in renewable sources such as wind and solar.[2] Since the private sector was reluctant to invest in merchant generation assets, the government created the Ontario Power Authority (OPA) in 2004 to enter into long-term power purchase contracts with generators, operating under the direction of the Minister of Energy. To expedite the government's policies and to avoid repeating the 2002 summer-time supply shortages, the government implemented a series of long-term contracting programs for specific types of generation technologies, including through competitive procurements, standard offer or feed-in tariff programs, and bilateral negotiations with private generators. Under each of these mechanisms the government guaranteed to buy power at a fixed unit rate over a specified time period, commonly 20 years.[3]

Since 2005, the OPA (now the IESO) has contracted for approximately 6,000 MW of wind capacity and more than 2,600 MW of solar capacity (IESO, 2016a). In total, the IESO has contracted for more than 27,000MW of energy. Ontario Power Generation (OPG) controls significant additional nuclear and hydroelectric capacity whose rates are regulated by the Ontario Energy Board.

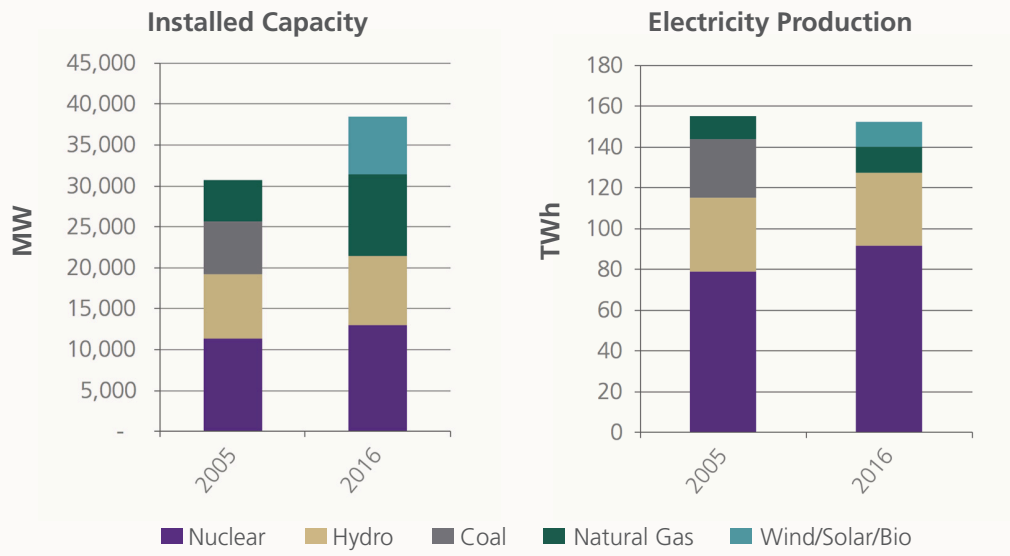
Figure 1 shows how the province's generation profile, including both contracted and regulated components, has changed over the eleven year period since 2005. Overall, the province expanded its installed generation capacity by a net 8,000 MW, increasing to a total of approximately 38,500 MW in 2016. Nuclear power has remained the single largest component, accounting for 11,400 MW in 2005 (37% of total capacity), increasing to 13,000 MW in 2016 (34%). Hydroelectricity was the second largest component in 2005 at 7,900 MW (26%), and has increased marginally to 8,500 MW in 2016 (22%). The most significant changes have been in renewable and natural gas generation. Wind, solar and bio-energy power sources added 7,100 MW over the eleven year period, and accounted for 18% of total installed capacity in Ontario in 2016. Natural gas installed capacity doubled between 2005 and 2016 (adding approximately 5,000 MW), increasing its share from 16% to 26%. Coal, which accounted for 21% of capacity in 2005, was eliminated from the supply mix by April 2014.

In terms of electricity production, overall power output in the province decreased marginally from 155 TWh in 2005 to 152 TWh in 2016. Nuclear accounted for the majority of output (92 TWh, 60% of overall output in 2016), and has increased both the absolute amount and its share of output since 2005. Hydroelectric power generation has remained steady at 36 TWh, and is the second largest component of overall output (23% in 2005 and 2016). Wind, solar and bio-energy accounted for approximately 8% of power output in 2016 (12 TWh). Natural gas output increased marginally between 2005 and 2016, despite the doubling of capacity, and accounted for about 8% of total output in 2016.

[2] Electricity Conservation and Supply Task Force, Final Report to the Minister, January 2004

[3] Contracts for natural gas generation were more complex and included clauses for fixed monthly payments.

Figure 1: Installed Capacity and Electricity Production by Fuel Type, 2005 and 2016



Source: IESO Supply Mix data and Ontario Power Authority 2005 Supply Mix Advice.

Investment in new generation capacity since 2005 has been supported in large part by long-term contracts with private generators that specify a fixed purchase price for energy produced (e.g. $135/MWh for wind power under the FIT program), though they are structured as 'contracts for differences', which provide two related components of revenue for the generators. The first component consists of the prevailing wholesale market price for power, referred to as the 'Hourly Ontario Energy Price' (HOEP). Since wholesale prices may be less than the contracted rate, the second component is the difference between the agreed contract rate and the wholesale price, and is included in the 'Global Adjustment' generation charge. The Global Adjustment consists of the costs of payments to contracted generators, as well as the costs of conservation expenditures, and payments to regulated generators. It exists because, in general, market-based revenues are insufficient to cover the full costs of contracted or regulated generation. The combination of the Global Adjustment and the Hourly Ontario Energy Price effectively represents average cost pricing, enabling generators to recover their variable and fixed costs.

Wholesale Electricity Market

Ontario's wholesale electricity market operates as a mechanism for dispatching generation units in order to ensure a reliable and continuous supply of electricity. The wholesale market price—the HOEP—is determined by offers submitted in advance by generators that specify the amount of power they are willing to provide and the offer price. The HOEP is the hourly average of twelve five-minute market-clearing prices that balance supply and demand. The five-minute market-clearing price, and ultimately the HOEP, is based on the offer of the marginal generating unit, and all dispatched generators, regardless of their offer, receive market revenues at the market-clearing price. Generators that submit offers greater than the five-minute market-clearing price are not dispatched and do not receive wholesale market revenues.

Since 2005 there has been a declining trend in the hourly energy price on the wholesale market, as illustrated by

Figure 2. Contributing factors include falling natural gas prices, lower demand for electricity within the economy, and expansion of generation capacity with low to zero marginal costs such as wind, solar and hydro. In the eight year period 2009 to 2016, the hourly energy price averaged $28/MWh, significantly below the average total cost of virtually any type of generation technology. Such wholesale prices are insufficient by themselves to incent investment in new dispatchable generation capacity, for instance natural gas, which is needed to complement the growth of intermittent renewable generation.

The decline in Ontario's wholesale market price does not necessarily imply that the average cost of generation has also declined, nor is the wholesale price necessarily an indicator of the average generation cost at any point in time. Two explanations are germane: first, in generation markets with excess capacity, such as in Ontario, wholesale prices are largely determined by variable or marginal production costs, not by average costs which additionally reflect fixed capital costs. A significant presence of renewable resources, which have low variable costs, further drives a wedge between wholesale prices and average costs.

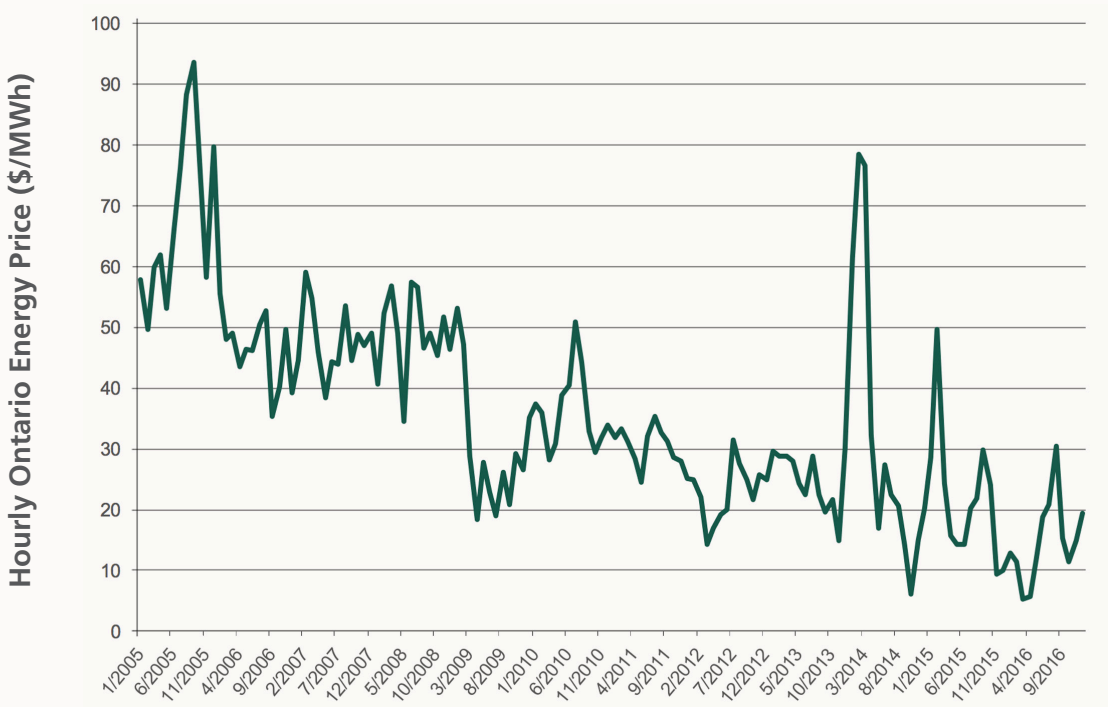
Second, strategic behaviour by generators can distort wholesale prices below even their marginal costs of production. For instance, before September 2013, renewable generators such as wind and solar were at times submitting offers to the market at prices equal to -$2000 per MWh. Notionally, an offer of -$2000 per MWh suggests that wind generators are willing to pay the operator $2000 per MWh dispatched, an unlikely proposition. In reality, wind generators knew that they were guaranteed to receive their contracted, fixed power purchase rate per MWh and wanted to ensure their power gained a favourable position in the merit order and was dispatched. Due to such strategic bidding behaviour by generators, between 2009 and 2014, the HOEP was negative for almost 2000 hours (equivalent to 83 days).[4] In response, in late 2013 the IESO established floor prices for transmission-connected wind and solar generation offers at -$10 per MWh for the first 90% of capacity (subsequently increased to -$3 per MWh) and -$15/MWh for the remaining 10% (Navigant, 2014b). Similarly, manoeuvrable nuclear generators have an offer floor of -$5 per MWh to limit strategic bidding. These examples illustrate that generators are not necessarily offering their production cost, but instead are adjusting their offers in accordance with the terms of their fixed price contracts.[5]

In this sense, generators' long-term purchase contracts can distort the wholesale market price since they reduce the incentives for generators to make offers in the wholesale market based on their cost of production. While the wholesale market price does not provide a perfect economic signal to producers and consumers, this does not imply that the wholesale market dispatch mechanism operates inefficiently over the short-term. Provided that the dispatch merit order is maintained, the five-minute market-clearing price still sends a reasonably accurate signal for short-term dispatch, and generally ensures that lower cost sources of electricity are dispatched before higher cost sources.

[4] Annual Report of the Office of the Auditor General of Ontario, 2015, page 216.

[5] In a slightly different context, Harvey (2013, pages 1-2) states that the hourly Ontario energy price "does not reflect the actual cost of meeting load … and therefore does not send an accurate signal for longer term decisions, such as the entry or exit of generation or of particular types of generation, for increases or decreases in power consumption, or for generators and dispatchable loads." Moreover, no entity in the province purchases electricity via the wholesale market (Alpin, 2017).

Figure 2: Hourly Ontario Energy Price



Source: IESO

THE COST OF GENERATION IN ONTARIO

The cost of contracted generation, which accounts for the majority of capacity in the province, is approximated by the sum of the wholesale market hourly spot price and the Global Adjustment amount, which acts as a full cost recovery mechanism (MacDougall, 2012).[6]

The formal description of the Global Adjustment is outlined in Ontario Regulation 429/04.[7] Officially, it is a payment variance that reconciles the difference between the earned revenues in the wholesale market and the rates established via contract. The relationship between the hourly Ontario energy price and the Global Adjustment may be characterized as a seesaw. When the hourly Ontario energy price goes up, the Global Adjustment goes down; and when the hourly Ontario energy price decreases, the Global Adjustment increases. This relationship is automatic and mechanical. Importantly, this seesaw relationship implies that neither the wholesale price nor the Global Adjustment by themselves provide an accurate 'market signal' to consumers or generators. Further, it is incorrect to interpret the Global Adjustment as an overpayment or 'above-market' payment for generation, as some commentators have claimed, since the wholesale price is not a true market price as would be observed in

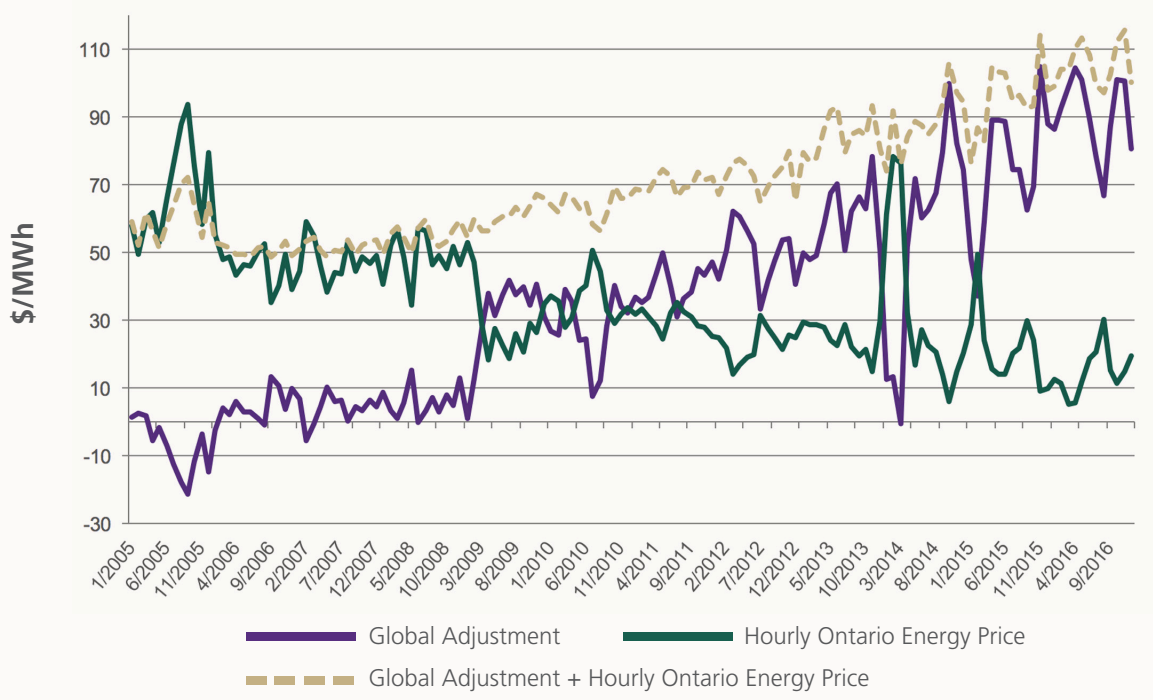
[6] Non-contracted generation includes Ontario Power Generation's nuclear and hydro electricity assets which have rates established through cost-of-service regulation.

[7] Section 1(1) of 429/04 precisely presents the calculation of the Global Adjustment.

normal competitive markets. The appropriate counterfactual for Ontario prices is less obvious than it might seem at first inspection and needs to be formulated as the inclusive price that covers both variable and fixed costs in the absence of policy intervention.

Figure 3 illustrates the hourly Ontario energy price and the unit Global Adjustment amount from 2005 to 2016. The hourly Ontario energy price is calculated as an hourly average of 5-minute dispatch prices, which are determined in the real-time market. The Global Adjustment is calculated monthly, and is based technically on the difference between the hourly Ontario energy price and (i) IESO's contracts with generators, (ii) contracted rates administered by the Ontario Electricity Financial Corporation, and (iii) OPG's regulated nuclear and hydro generation rates (IESO, 2016b). The seesaw or inverse relationship between the Global Adjustment and hourly wholesale energy price is immediately obvious in the Figure.[8] While the hourly price has steadily declined since 2005, albeit with natural monthly variation, the Global Adjustment has increased over the same period, mirroring monthly movements in the hourly price.

Figure 3: Hourly Ontario Energy Price and Global Adjustment, 2005–2016

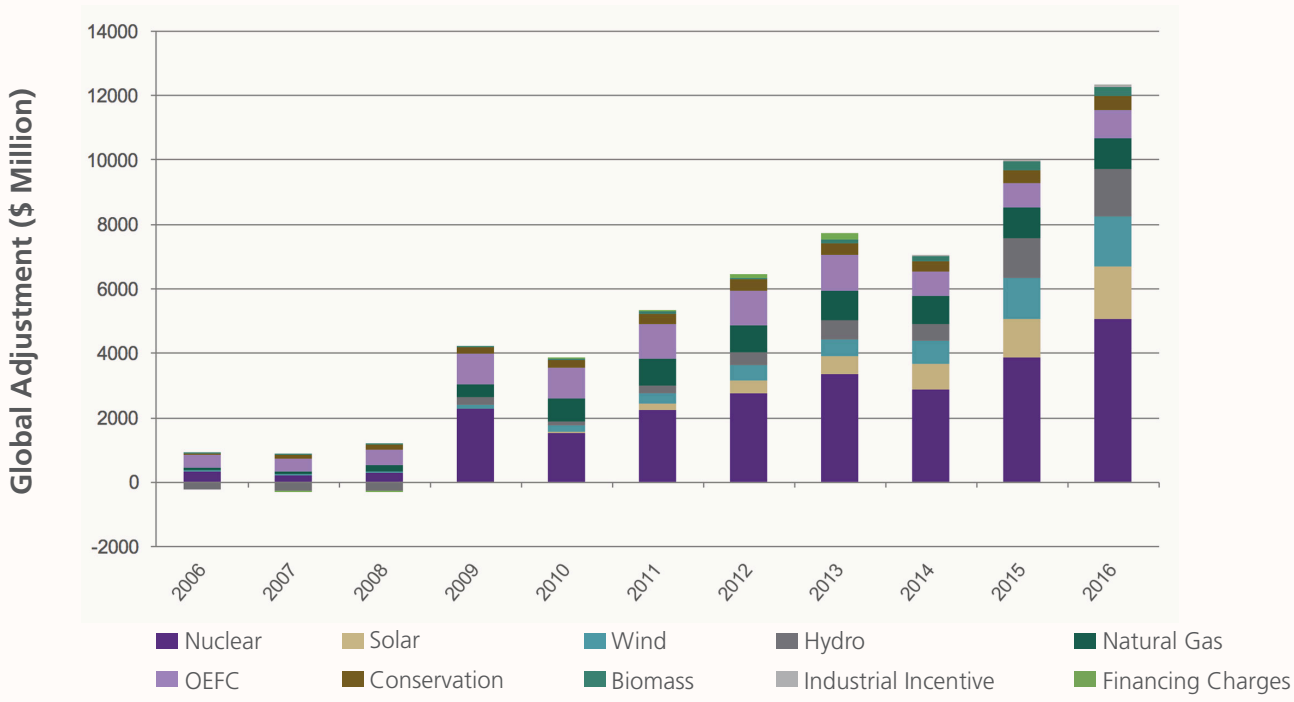


Source: IESO

[8] The relationship is not a perfect one-for-one because the Global Adjustment is a true payment variance and hence includes the costs of conservation programs and financing charges. Also because the Global Adjustment shows up in customers' biannual rate plans, the Global Adjustment, in conjunction with the hourly Ontario energy price, induces a small demand response.

Decomposing the Global Adjustment into its components provides some insight into the share of costs attributable to different generation fuels as shown in Figure 4. It does not provide an accurate picture of total generation costs by fuel type since it does not include costs recovered through wholesale market revenues, though these were a minor share in 2016. The overall Global Adjustment was $12.3 billion in 2016. Nuclear accounted for the single largest share of Global Adjustment costs at 41%. Solar and wind power each accounted for 13%, hydroelectric power for 12%, and natural gas for 8%. Other components summed to 13%.

Figure 4: Global Adjustment by Component, 2006–2016



Source: IESO

REASONS FOR GENERATION COST INCREASES

Rates paid for electricity in Ontario have increased despite a steadily decreasing wholesale market electricity price due to corresponding increases in the Global Adjustment as previously described. While a formal analysis of the sources of these rate increases is beyond the scope of this report, it is valuable to briefly review some of the underlying reasons for the increase in generation costs.

The average unit cost of generation (per MWh) is represented by the dashed line in Figure 3, the sum of the hourly wholesale price and Global Adjustment. From 2006 until 2009, the average cost was relatively stable, remaining between $50 and $60/MWh. Since 2009 there has been a continuous upward trend in the average cost of generation, reaching more than $110/MWh by late 2016. Several factors have contributed to this trend:

Phase out of low cost coal-fired generation. Between 2005 and 2014 Ontario gradually phased out all coal-fired plants, which provided 25% of power generation in the province at a relatively low unit cost (approximately $48/MWh). The coal fleet was reaching the end of its productive life, and new capital investment required to replace it would have increased system-wide costs of generation, and hence rates, regardless of the replacement type of generation fuel. For example, the refurbishment of Bruce Power nuclear units, which provide base load power, yields power at a contracted rate of $66/MWh. Offsetting higher costs, however, are health and environmental benefits from switching from coal to less emission-intensive fuel sources.

Increasing share of renewable fuels. The 2009 *Green Energy and Green Economy Act*, and initiatives such as the Renewable Energy Standard Offer program launched in 2006, have led to the development of a significant amount of wind, solar, hydroelectric, and bio-energy capacity, supported by fixed feed-in tariffs guaranteed for 20 years. Between 2005 and 2016, the province added approximately 7,100 MW of new wind, solar and bio-energy capacity, accounting for 18% of installed capacity in 2016. The rates paid for renewable power are greater than rates paid for nuclear and hydroelectric power which provide the bulk of electricity for the province, for instance ranging from $135/MWh for on-shore wind to $443/MWh for ground-mounted solar PV under the 2012 FIT pricing schedule. Power purchase prices for new solar capacity have since declined as technology costs have fallen steeply, but remain above levelized unit costs for natural gas and nuclear power. In addition to higher direct costs, the expansion of renewable generation capacity has required complementary investment in transmission and distribution sector upgrading, an indirect cost implication for the electricity system.

The Ontario Energy Board provides annual estimates of average generation costs by fuel type based on total payments to generators operating under all contract and regulation mechanisms. The OEB's 2016-17 estimates illustrate the higher average cost of wind, solar and bio-energy relative to nuclear and hydro (see Table 1). It is notable that the average cost of natural gas power is greater than wind and bio-energy power, despite low wholesale gas prices, which may be account for the low capacity utilization of natural gas generation assets.

Table 1: Average Costs of Generation per MWh by Fuel Type

Generation Fuel	Average Unit Cost ($/MWh)
Nuclear	66
Hydro	58
Natural Gas	173
Wind	140
Solar	480
Bio-Energy	131

Source: Ontario Energy Board Regulated Price Plan Report, November 2016 to October 2017. Hydro excludes NUGs and OPG non-prescribed generation. Gas includes Lennox, NUGs and OPG bio-energy facilities.

Overall growth in installed generation capacity. Expansion of the province's generation portfolio began in the early 2000s when the economy was growing robustly and when there were heightened concerns about supply outages, especially following the major regional blackout in Ontario and the north east U.S. in August 2003. In addition, given the shift towards renewable power generation, which is intermittent, the province needed to invest in complementary natural gas or other dispatchable capacity that could operate during periods when renewable power was not available. Ontario added 5,000 MW of natural gas capacity between 2005 and 2016, much of which provides peak and mid-peak power, to bolster system reliability and to satisfy regional needs. The overall amount of installed capacity in the province has increased significantly over the last decade. In 2016, installed capacity was approximately 38,500 MW – a 25% increase from 30,500 MW in 2005. While capacity has grown, however, overall annual domestic demand for grid power has declined, due to a combination of pricing

effects, weaker economic growth, enhanced conservation efforts, and expansion of distributed energy resources. According to IESO data, grid demand declined by 10% from 2006 to 2015, reflecting, in part, the impact of the 2008 Great Recession. Annual peak grid demand has also fallen sharply, from an all time high of 27,000 MW in August 2006 to 22,500 MW in 2015. While long-term forecasting of electricity demand is notoriously difficult, the province has invested in new generation capacity that has proved to be in excess of typical needs, contributing to higher system-wide costs and consumer bills.

SMOOTHING CONTRACTED GENERATION COSTS

The rapid pace of contracting for new generation capacity since 2005 has contributed to a corresponding escalation in consumers' electricity bills. Over the last decade, regulated electricity rates for residential consumers have almost doubled, creating a degree of 'rate shock' and leading to calls for generation market reform. While the government has taken some heat for rising bills, there is a potential policy solution that is economically rational and relatively simple to implement. The government could smooth the costs of contracted generation capacity—which account for more than half of electricity system costs—over a longer period of time than is currently planned, reducing consumer bills in the short to medium term in return for slightly higher bills in the long term. This is akin to household mortgage refinancing that lowers monthly payments by extending the term.

The economic rationale for such a smoothing policy is that the useful productive lives of contracted generation assets—payments for which constitute the bulk of Global Adjustment charges—are in many cases longer than the durations of the contracts. For instance, wind power RESOP, FIT and LRP contracts are structured for 20 years, even though wind turbines and equipment may be expected to operate for 30 years or longer, assuming periodic maintenance and refurbishment is undertaken. Similarly, natural gas generation contracts are generally for 20 year periods, though in the U.S. gas plants have often been retired after 40 years. Besides wind and natural gas, there may be additional generating assets that present opportunities to smooth costs for consumers. Under 20 year contracts, generator capital costs are amortized too quickly relative to the useful life, leading to higher annual capital charges than would be the case if the amortization period was extended to the full expected life span.[9] Charges to consumers for contracted generation could hence be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged on consumer bills would more closely reflect the true economic costs of the assets.[10]

There are three possible methods to accomplish generation cost smoothing in Ontario, recognizing that many new contracts with generators have already been signed over the preceding 12 years.

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[9] Generators have strong incentives to fully amortize fixed capital costs over the duration of the contract, and to build these costs into competitive supply bids, even if the contract duration is shorter than the expected lifespan of the asset. Once a generation facility is constructed it becomes a physically sunk asset, leaving the generator with considerably reduced bargaining power at the end of contract. Even if the government wishes the generator to continue operating after the end of the contract, it may offer to purchase power only at the variable or operating cost of production, providing minimal opportunity for the generator to recoup sunk fixed capital costs. As long as the purchase price at least covers variable costs, it is rational for the generator to accept the government's terms and to operate.

[10] The same smoothing principle could be applied to other generating assets where contract durations are less than expected asset lifespans. It is also applicable for expenditures on conservation projects, which can involve upfront investments in capital assets that reduce electricity demand over multiple years. For instance, high efficiency industrial refrigeration compressors are expected to operate for more than a decade. Currently, conservation expenditures are fully recouped in Global Adjustment charges in the year in which they occur. The Ministry of Energy estimates that smoothing conservation expenditures over asset lifespans could reduce electricity system costs in the short term by $300-$500 million.

1. Option for existing generators to bid for new long-term contracts

First, the government could offer generators with existing contracts the opportunity to bid for new contracts that would supersede their current contracts, stipulating that (a) the time horizon for a new contract must extend beyond the current one, and (b) the new purchase price for electricity for the duration of the new contract must be lower than the current contracted rate. If the generator and government reach agreement on new terms the new contract would replace the original one. Otherwise, the original contract would remain in force.

From the generator's perspective, this provides an opportunity to lengthen the time horizon of financial returns on their investment, and to increase the extant expected net present value of the project. It also pre-empts a potentially challenging renegotiation with the government at the end of the original contract when the assets still have productive capabilities but have been fully amortized. From the government's perspective, generation costs would be smoothed over a longer period of time as determined by individual generators on a case-by-case basis, lowering average electricity bills in the short to medium term.

There are several caveats with this approach. First, substantial rate reductions will be achieved only if there is sufficient competitive bidding pressure between generators for contract extensions. Since future demand for electricity in the province may well decrease, the government need not extend all generator contracts, which could create some implicit bidding competition – but the likely degree of competition and downward pressure on rates is uncertain ex ante. Second, the process of negotiating contract extensions could be administratively complex and time consuming for both the government and generators. The government has contracted with thousands of private entities since 2005. Generators would also likely need to renegotiate their own contractual arrangements with a range of parties in addition to the government, including landowners, financiers, local communities, and Aboriginal groups, a complex and uncertain exercise. A third caveat is that providing new long-term contracts to generators could impact the proposed introduction of a capacity market in Ontario if generators became less willing to participate in capacity auctions.

2. Short-term government subsidization of payments to generators

An alternative and potentially simpler approach for smoothing the amortization of generation costs is for the government to subsidize, in the short to medium term, a portion of annual contracted payments to generators operating under existing contractual terms, and to reduce consumer bills by the corresponding amount. The subsidy each year would equal the difference in annual amortization currently charged (based on the contract duration) and the annual amortization amount calculated using the productive life of the asset. Interest rates on government debt (which would fund the short-term subsidy) are currently very low (2.4% on Ontario's recent 10-year bond issue), making this a relatively cost-effective strategy, though it would increase public sector debt. Generator contracts would be unchanged in this scenario. An advantage of this approach is that it avoids the administrative cost and uncertainty of renegotiating in a short time period multiple contracts on an individual basis with generators, and it can be implemented relatively rapidly. On the other hand, the government would ultimately still need to negotiate new contracts with generators when existing ones expire in the future, in order to ensure that generation assets continue to operate, where needed, beyond 20 years.

In both approaches, the quid pro quo is that consumers would pay more for electricity in the future to reflect the longer amortization period, specifically during the years beyond the end of the original contract and up to the useful life of the generation assets. Generator refurbishment and maintenance costs may also increase for older assets, implying upward pressure on rates when generator lives are extended beyond anticipated contract end dates.

3. Long-term contracting policy

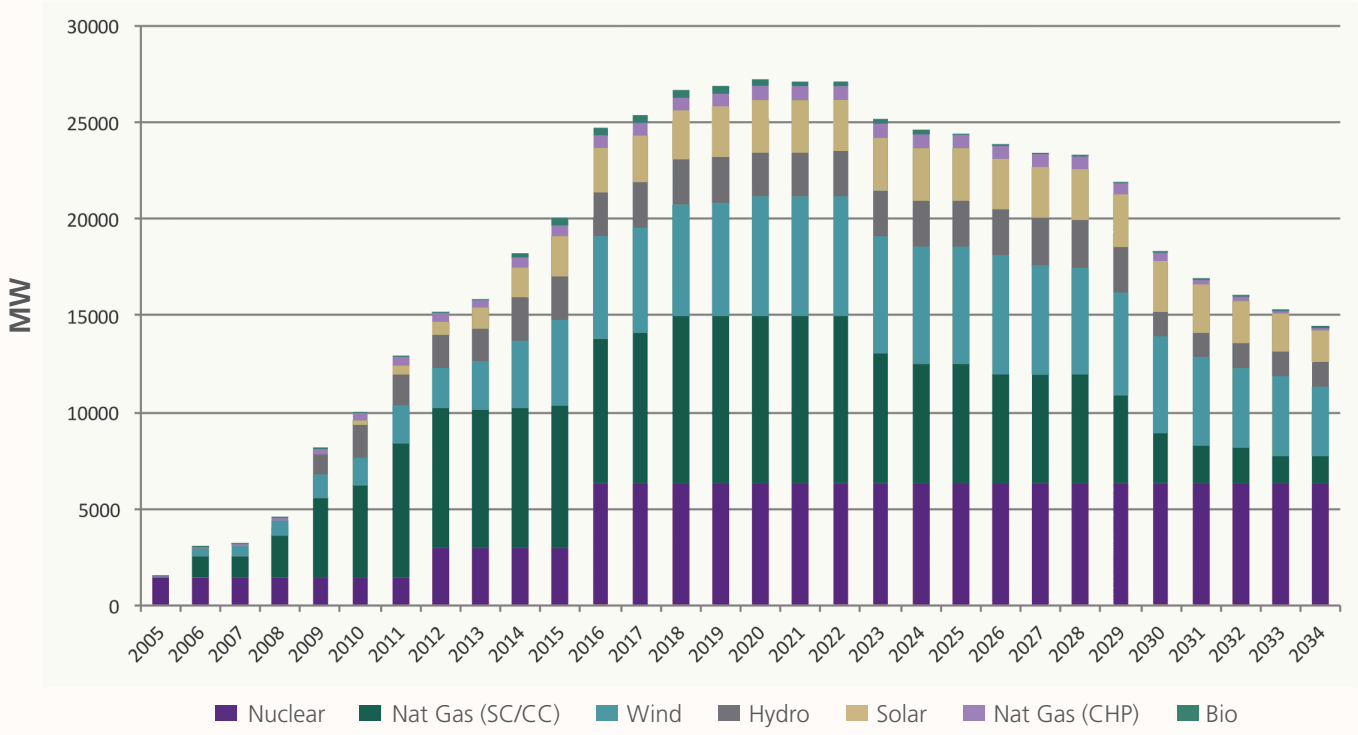
In future contracting exercises for new generation capacity, the government could invite generators to submit bids that include the proposed contract duration, and evaluate such bids on the basis of contract duration as well as on purchase price and other factors. Providing flexibility on duration would encourage generators to match the contract period to the expected productive life of the asset, resulting in (lower) annual amortization costs that reflect the true economic cost.

Preliminary Estimate of Impact of Smoothing Contracted Generation Costs

Estimating the potential impact on electricity bills from stretching out generation asset amortization periods requires detailed information on the terms of generator contracts, which are not publicly available. Assumptions based on available Ontario Energy Board (OEB) and IESO data, however, can lead to approximate calculations, albeit with circumscribed confidence in their accuracy.

Since 2004 the Ontario government has contracted for a significant amount of new generation capacity through competitive procurement exercises, bilateral negotiations, and feed-in tariff programs. By 2006, approximately 3,000MW of newly contracted capacity was operating; by the end of 2016, almost 25,000MW of contracted nuclear, natural gas, hydro, wind, solar, and bio-energy capacity was in place, representing a dramatic increase in procurement over a 10-year period. New procurement is expected to slow down in the coming years, reaching a peak of 27,000 MW accumulated contract capacity in 2020.

Figure 5: Contracted Generation Capacity by Fuel Type, 2005–2034

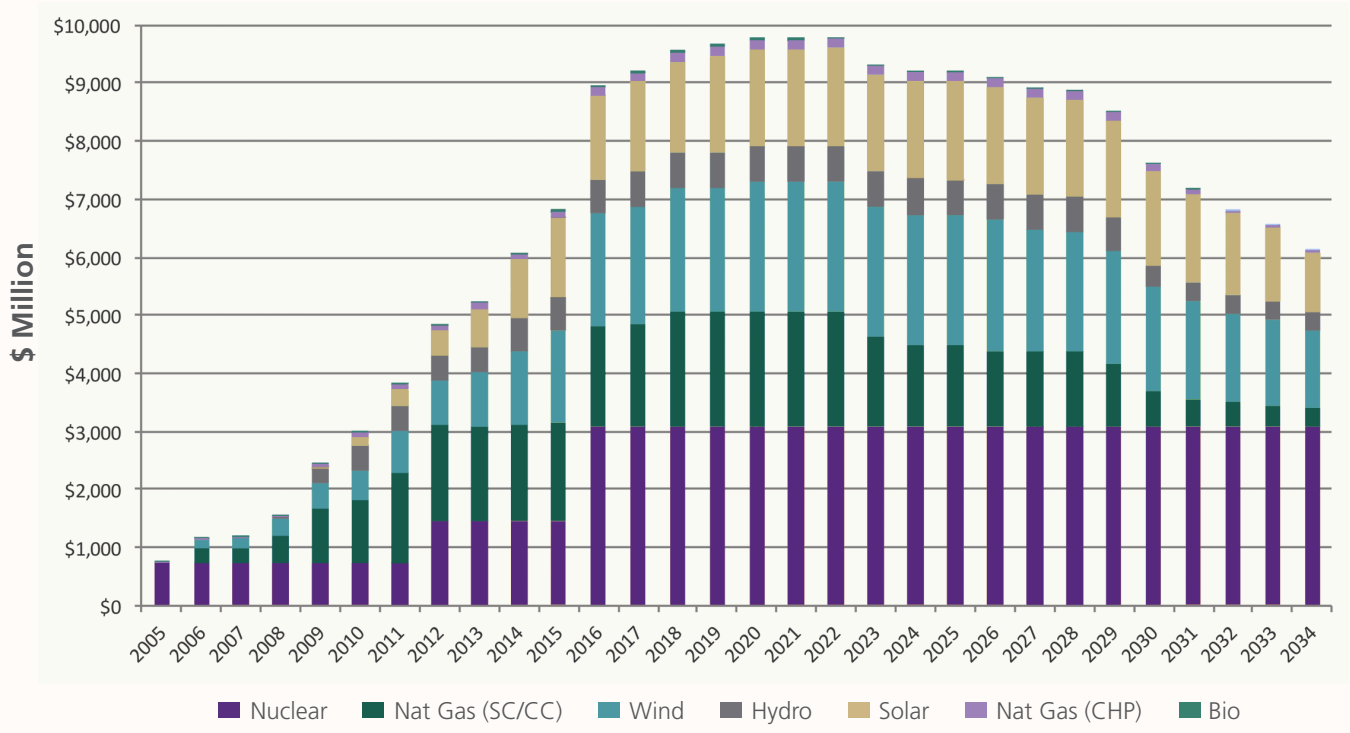


Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016. 'Other' fuel category omitted for simplicity.

Figure 5 shows the amount of accumulated contracted capacity for each fuel type for the 30-year period from 2005 to 2034. There has been a significant increase in contracted natural gas generation (representing 33% of total contracted capacity in 2017), as well as in nuclear (25%) and wind (22%). Solar, hydro, bio-energy and other fuels account for the remaining 20% of the 2017 total. OEB data on the average unit cost of electricity by fuel type, and IESO data on capacity utilization, leads to approximate estimates of the annual cost of contracted generation capacity.[11] In 2016, payments to contracted generators are estimated to have totalled approximately $9 billion. The estimated costs of contracted generation by fuel type are shown in Figure 6.

An important feature of Figures 5 and 6 is that they chart the contractual duration of capacity, not the useful productive lifespan of the generating assets. According to the IESO, contract terms vary from 5 to 21 years for bio-energy to 31 to 57 years for nuclear units. For natural gas and wind generation, as well as solar, contract periods appear to be somewhat shorter than typical estimates of expected lifespans (see Table 2), though lifespan estimates depend on a multitude of factors such as the specific technology type within a broad category, capacity utilization, and climate conditions. Some caution must thus be used in applying average industry lifespans to the specific case of generators in Ontario.

Figure 6: Estimated Cost of Contracted Generation, 2005–2034



Source: Author estimates. 'Other' fuel category omitted.

[11] Average effective power purchase rates per MWh for each fuel type are assumed to be as calculated in the OEB's Regulated Price Plan Report, November 2016. Rates range from $58/MWh for hydroelectric generation to $480 for solar. The same rates are applied each year in the analysis, though it is expected there will be variation in practice due to the changing mix of generation contracts with different purchase terms. Capacity utilization is estimated based on IESO reported installed capacity availability and actual power production for each fuel type in 2016 (http://www.ieso.ca/Pages/Power-Data/Supply.aspx)

Table 2: Durations of Generator Contracts and Expected Asset Lifespans[12]

	IESO contract duration (range)	IESO contract duration (mid point)	IEA lifespan estimate[13]	EIA lifespan estimate[14]
Natural Gas	10–20 years	15 years	30 years	30 years
Wind	20	20	25	30
Nuclear	31–57	44	60	
Hydro	20–50	35	80	
Solar	20	20	25	30

Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016.

Nonetheless, estimates of the impact of smoothing generation costs on consumer bills can be calculated under hypothetical scenarios where generator lifespans are assumed to extend to 30 years for natural gas plants and wind farms, and 25 years for solar PV (existing contracts are assumed to all be for 20 years). We do not model contract extensions for nuclear power given the specific nature of CANDU technology, or for hydroelectricity, bio-energy or CHP which are a relatively small share of total contracted capacity costs.

By the end of 2017, contracts for natural gas generation will be an estimated 8 years old on average, implying that 40% of original capital costs will have been amortized. Amortizing the remaining 60% of capital costs over the next 22 years instead of the originally-planned next 12 years suggests a reduction of up to 45% in annual natural gas generator capital charges may be possible in 2018. For wind power contracts, which will be on average 5 years old in 2017, the equivalent potential reduction in annual capital charges is up to 40% in 2018, and for solar 25%.[15]

In 2018, the total value of reductions in natural gas, wind and solar generation capital charges is estimated to be in the range of $1.5–$2.0 billion (see Figure 7), equivalent to approximately 8% of total expected electricity system costs. The amount of the annual reduction declines gradually over time in part due to interest costs on debt for the accumulated subsidy.[16] Additional asset refurbishment expenses in the latter part of the lifespan of generation assets would also reduce the amount of annual savings. After 2030, bills are forecast to be higher for several years than they would have been without smoothing.

[12] Retirement ages of generation plants also indicate lifespans. In the U.S., natural gas plants have often reached more than 40 years before retiring (Powell, N. America's Ageing Generation Fleet. Power magazine, 28 January 2013).

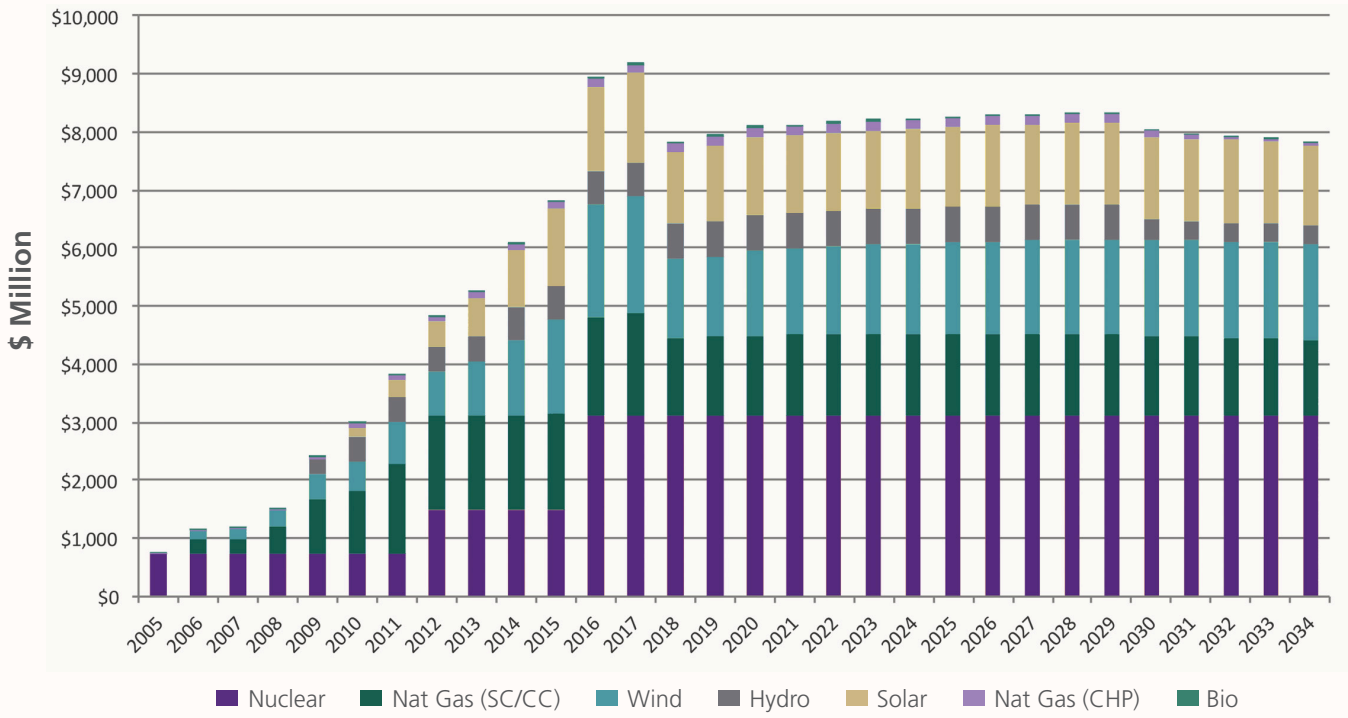
[13] International Energy Agency. 2015. Projected Costs of Generating Electricity.

[14] Energy Information Administration. 2016. Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2016. August 2016.

[15] Smoothing is applied only to the assumed capital component of unit generation costs. For wind and solar power which have zero fuel costs, and relatively low variable operation and maintenance costs, it is assumed that 90% of the power purchase rate is accounted for by capital costs. For natural gas capacity, which is assumed to have an average capacity utilization rate of 15% based on IESO data, and an average effective power purchase rate of $173/MWh (based on OEB estimates), the capital cost share is assumed to be 70%. Lower capital cost percentages would reduce the impact on current consumer bills of a smoothing policy.

[16] The interest rate on long-term debt is assumed to be 2.4%, which is the most recent rate on 10-year Ontario government bonds. Annual interest charges on the accumulated debt are assumed to be paid in full in each year by ratepayers through inclusion in electricity bills.

Figure 7: Estimated Smoothed Cost of Contracted Generation, 2018-2034



Source: Author estimates. 'Other' fuel category omitted.

These estimates are preliminary and reflect the specific assumptions of the model. Alternative assumptions would naturally lead to larger or smaller reductions in near-term contracted generation costs. They are also calculated for option (2) above in which the government finances the smoothing of contracted generator payments over an extended period, leaving original contracts unchanged. The alternative approach outlined in option (1), where generators bid competitively for new long term contracts that supersede existing ones, may deliver similar savings if all contracted generators participated and agreed to equivalent reductions in power purchase rates.

While smoothing generation costs can ease the transition for current households and firms to a higher cost electricity system, there are risks and limitations associated with such a policy. One risk is that future changes in markets, technologies, government policy, or demand for electricity may reduce the need for longer-lived generation capacity, potentially creating future stranded costs. In addition, an important consequence of smoothing is that it raises questions about inter-generational equity since consumers in the long-term future will contribute towards a larger share of generation capital costs, and consumers will also pay interest costs associated with short-term subsidization of rates. Some commentators have advocated for the status quo, citing the imposition of interest costs on future consumers as inequitable. However, the corollary to this argument is that the current approach of amortizing generation capital costs too quickly relative to expected lifespans is effectively a subsidy by current ratepayers of future consumers, who would have usage of the assets but not have to contribute to their capital costs. In addition, as economic growth continues, future generations will be wealthier than today, making any given level of electricity costs more affordable.

CONCLUSION

Wholesale electricity markets in many jurisdictions exhibit a variety of imperfections that affect investment, production, and consumption decisions. Wholesale market prices for electricity, including in Ontario, often do not provide an accurate representation of the full economic cost of production, which consists of short-run variable costs (e.g. fuel costs) and long-run fixed capital costs. Wholesale prices are often determined instead by short-run variable costs, especially in environments where there is excess generation capacity, implying that additional mechanisms—such as long-term power purchase contracts—are needed to enable generators to recover their full costs.

Since 2006, the hourly market price for electricity in Ontario has steadily fallen, owing to a decrease in demand and the addition of new capacity resources with low short-run variable costs. At the same time, the underlying cost of generation has increased as the province has made investments in new and refurbished capacity to ensure system reliability and to replace coal, and also added wind and solar supply—which are more costly than nuclear, hydro-electric, and coal generated power—in order to achieve environmental goals. The full cost of generation is reflected in the sum of the hourly wholesale market price (HOEP) and Global Adjustment, which enables generators to recover both short-run variable and long-run fixed costs of electricity production. The Global Adjustment is thus an important component of ensuring a well-functioning generation sector.

Despite the rapid escalation in generation costs that Ontario has experienced since 2005, there is an economic rationale for smoothing rates and reducing electricity bills for consumers in the short-run. Amortizing contracted generation capital costs over longer periods to match with the productive lifespans of the assets, which are often longer than the contracted terms, could reduce current electricity system costs by approximately eight percent, a preliminary estimate. Under this approach, the cost of generation charged on consumer bills would more closely reflect the true economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term, raising the challenging issue of inter-generational equity.

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From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Thursday, April 20, 2017 1:40:04 PM
Attachments:	the-economic-cost-of-electricity-generation-in-ontario-april-2017.pdf

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From: Nelms, Scott (MOF)
Sent: Thursday, April 20, 2017 11:51 AM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Hi Dave,

Here is my next installment of Thursday OFHP. Note that I have attached a report from IVEY, referenced later in the document.

- AG discussion (Yesterday):
  - ENE Lead, walked through the March technical briefing presentation
  - TBS DM suggested that this was the first of several meetings and considers this to be a high level, first pass
    - Lots of moving pieces where the Province does not yet have clarity
    - Will take back questions and will respond once it has more certainty on structure
  - The AG and staff had the following questions:
    - Legislative precedent of shifting ratebase to tax base, and can the tax base support these additional charges?
    - Why use trust mechanism for Affordability Fund, and should the Trust be consolidated?
    - Seeking more details on the accounting for the OFHP and wanted reports to justify what is set out in the Budget
    - Also seeking independent studies to back up 30 year contracts (ENE referenced Ivey report)?
    - Asking about mechanics of the OPG Trust, OEFC lending etc.?
    - What was used to brief the FAO?
- Legal Update
  - Timing Update
    - Pens down now on the 28th
    - May 9th TB
    - May 10th Cab
    - May 11th introduction
  - Latest large legal discussion took place on Monday
    - This was the first run through of legislation draft (up to that point discussions focused on turns of instructions to leg. counsel)
  - Current Status
    - Turning a new draft today
    - Trying to find balance and working through all the wording from various parties

(some of which is inconsistent)
- Received very detailed feedback from OPG / Torys and others
- In all-night drafting stages
- Trying to balance stakeholder consultation time and drafting time

- Tension between enabling the transaction in legislation and embedding the transaction in legislation
  - Determining how many questions need to be answered now and what can be pushed to regulation / commercial agreements
  - Legislation will include indications to regulations, but will not have all filled in
  - Difficult because American examples embed transaction in legislation
- At least one more turn of legislation
  - If comments quickly, may be able to turn more than once
  - Seeking comments by no later than Sunday
- Business Issues
  - Guarantees
    - General powers to be enabled in legislation and details will flow in regulations / commercial arrangements
    - MoF / TBS suggests Minister of Finance should have power to provide guarantees under FAA
    - First ask from dealers included several elements that would likely not be palatable to the Province
      - For example, a make-whole penalty which creates a very expensive break fee
    - OPG and OFA to develop a set of proposed guarantees, rather than negotiating with dealers
  - OPG requires cash flows immediately (interest payments starting on Day 1)
    - Need to meet this objective while meeting the Province's commitment to reduce rates by 25% and maintain increases at inflation for next 4 years
    - Without these payments there would be an adverse effect on credit metrics, and earnings (fiscal)
    - Response:
      - IESO will pay interest costs to OPG Trust on an ongoing basis, funded through its line of credit, resulting in a larger deferral
      - OPG Trust would then purchase the deferral from IESO (consistent with mechanism already being contemplated)
      - Need to determine accounting impact to IESO, KPMG's preliminary view is that this will work
  - Should Province / OPG be targeting AAA rating and what is the impact of Provincial guarantees?
    - Interaction with required Provincial guarantees
      - Fed example of Muskrat Falls, no make-whole, convert to Canada bonds, still trades 80 bps back from Canada
    - Regardless of rating, will trade back from Ontario
    - S&P tends to focus on back-stop more so than Moody's, DBRS, so may have a split rating

- S&P more focus for US investors so may not be as relevant if Canadian focus initially
- AAA rating helps for securitizations and important to aim as high as possible given unique structure (needed in order to attract those investors
- Important target, but need to avoid setting up potential expense of $100s of millions in break fees

- Approvals for equity injections
  - Need to have appropriation approvals in TB sub
  - Focus on an annual approvals process, followed by a streamlined monthly flow of funds
  - EIGS (me) to work through this with OFA, OPG and TBS and report back
- Con Law issue
  - Navigant engaged by ENE and working through an analysis of the underlying life of assets
  - Lawyers working on reverse engineering legislation to ensure it is constitutionally sound

- OPG Update
  - Special Board committee yesterday to briefing on status of legislation
  - Formal approval May 5th from Board
  - Accounting letters now working through process (E&Y letterhead, they are in agreement)
  - Credit Rating process
    - Will approach rating agencies post-regulations, with a framework for commercial agreements
    - OPG anticipates ~1 month to receive preliminary view from rating agency
    - And a few additional weeks to finalize
    - Final rating will come once contractual arrangements are in place
  - OPG working with IESO on operations and framework of how the purchase and sale agreement will work
    - Iterative process starting now
    - Will need to move as legislation / regulation develops
- IESO Update
  - Discussions with OFA on enhanced LoC underway
  - Accounting opinion in development
    - Main focus on risk to IESO in event OPG in future does not purchase the asset (need recoverability from ratepayers without taking away from rights of the Trust); dealers do not want to keep layering on additional charges to ratepayers
      - Ok if Province owns separate cash flow, but not so comfortable if IESO then sells to a separate financing entity (worried about prioritization)
      - Can the Province backstop without a fiscal hit on the entire transaction structure
  - IESO IT Audit
    - May be looking into Market Surveillance Panel functions
    - Meeting Tuesday afternoon with AG on the OFHP (plan to state this is still in process)

- OEB
    - Today the RPP for May will be announced
        - Taking into account all elements of the Fair Hydro Plan that seemed prudent to include
        - OEB seemed to suggest 50% now and remaining 50% dependent on legislation implemented so anticipate a further change to rates on July 1
    - Need more details on OEB's anticipated role in setting up regulatory assets

Social Programs

- RRRP
    - Meeting of LDCs earlier in the week (43 attended)
    - ENE provided update on activities underway
    - Re-enforced need for updates to systems by July 1, and LDCs were receptive
    - Discussed bill presentment and LDCs were comforted that only limited changes needed now, more extensive changes in the fall
- OESP
    - Working through legislative changes in support of this initiative
    - MCSS and ENE working to get to automatic enrollment, and appear to have a path
    - Discussions with CRA underway, received message that this is a priority to remove wet signature requirement
- FN rate
    - ENE sitting down next week (Wed) to discuss operationalizing credit with COO
- Affordability Fund
    - Advisory committee met on Tuesday
        - Consensus on selection of Trust representatives
            - Hydro One, Alectra, Thunder Bay Hydro
            - Ottawa-Carleton United Way, Advocacy Centre for Tenants of Ontario
        - Will follow up on specific representatives from those organizations
        - Given AG questions, important to move on this as quickly as possible

ICI

- Shifted beyond approvals
- Working with OCE and CME on outreach campaigns
    - Asked to participate in next AGM of OCE to provide overview of ICI
- Also coordinating with LDCs to advise them of changes

Other Updates

- TB May 9th
    - Will include social programs
    - GA smoothing legislation
    - Appropriation approval for equity injection
- IVEY Energy Centre released a report that walked through the merits of GA Smoothing (attached)
- Will re-schedule the next meeting for Tuesday, recognizing budget release date is next Thursday

IVEY Business School
WESTERN UNIVERSITY · CANADA
Energy Policy and Management Centre

Policy Brief
April 2017

The Economic Cost of Electricity Generation in Ontario

EXECUTIVE SUMMARY

- The overall cost of electricity generation, which accounts for almost two-thirds of Ontario's total system costs, has increased significantly since 2005 mainly due to a substitution away from coal generation towards more costly renewable sources, and a parallel increase in the total amount of installed capacity in the province, notably due to an expansion in the amount of natural gas capacity.
- The unit cost of electricity generation is approximated by the sum of the wholesale market price and the Global Adjustment. Wholesale market prices reflect, in part, short-run variable costs, but often fall short of the total cost of producing electricity, which includes significant fixed capital costs. The Global Adjustment is a mechanism that, in conjunction with the wholesale hourly market price, ensures recovery of variable and fixed generation costs. As such, the Global Adjustment is not an overpayment but a component of the full economic cost of generating electricity.
- Recent increases in consumers' electricity bills have been driven in part by the rapid expansion of generation capacity in the province, much of which has been financed under 20 year contracts with private firms. Current rates and electricity bills could be reduced by amortizing contracted generation capital costs over longer periods to match the productive lifespans of the assets, often longer than the contracted terms. The cost of generation charged on consumer bills would then more closely reflect the economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term.

INTRODUCTION

This report brings an economic perspective to the analysis of electricity generation costs and prices in Ontario. Generation accounts for approximately two-thirds of Ontario's total electricity system costs, making consumers' electricity bills particularly sensitive to changes in generation policies and the cost of ensuring that sufficient generation capacity is available to meet demand. In Ontario, the wholesale price of electricity generation has declined since 2006, yet regulated rates for household consumers have almost doubled, creating confusion over the reasons why bills have increased. While a comprehensive analysis of electricity system costs and consumer bills is outside the scope, this report provides an economic cost analysis of the generation component of electricity bills, which can reconcile these seemingly contradictory trends. An important insight, which comes from the experiences

of jurisdictions that have deregulated their power generation sectors, is that wholesale generation markets are often distorted by the effects of administrative restrictions on market operations and by parallel long-term contracting policies, undermining the signals that market prices would otherwise provide for efficient generation production, investment, and consumption decisions. In such markets, wholesale market prices are shaped in part by strategic bidding behaviour of generators, and need not accurately reflect underlying average or marginal costs of generation. Consequently, a complete account of the cost of generation, and its pricing, requires a broad analysis that incorporates a range of generation sector policies.

WHOLESALE ELECTRICITY MARKETS AND INVESTMENT IN GENERATION CAPACITY

In competitive markets with many buyers and sellers, homogenous products and firms, and unrestricted exit and entry, market prices send crucial signals to firms and consumers, and help balance demand with supply. Importantly, these conditions create a close relationship between prices and costs since competitive pressures push prices to the marginal cost of production. External shocks to demand or supply that shift prices will cause firms to enter or exit the market, moving prices to long-run average cost levels over time. For example, an increase in demand that increases prices will encourage new firms to enter the market, subsequently exerting downward pressure on prices. In the long-run, market prices enable firms to recover both fixed and variable costs, and to earn a normal rate of return on capital invested. Hence, in competitive markets, prices are an indicator of the long-run cost of producing goods and services.

Wholesale electricity generation markets, however, generally do not conform to the ideal of an unfettered competitive market (Borenstein, 2016). The distinctive characteristics of electricity markets are many and well known. Electricity is not storable in large quantities so production must match extant demand. Renewable power sources are intermittent, necessitating complementary investment in dispatchable generation capacity that may have low utilization rates. Transmission and distribution are subject to congestion, creating conditions for oligopoly or even monopoly pricing. Demand is highly price-inelastic in the short-term for many consumers, implying consumers are willing to pay high prices for electricity. Variable costs of production are small relative to high fixed costs, especially for renewable power sources, meaning variable costs can be significantly lower than average costs. Renewable power, which governments have encouraged for environmental reasons, often has higher average unit costs than fossil fuels, often requiring additional policy instruments to support private investment. Entry by new generators is highly regulated, and it can take many years for permitting and construction to be completed, leading to extended periods of under- or over-supply of capacity. Under such conditions, wholesale electricity market prices can diverge from average costs for long durations, creating an uncertain investment environment for generators. Two risks are particularly germane:

First, small shocks to demand or supply can lead to rapid escalation in wholesale market prices given short-run price-inelasticity of demand and supply. For instance, in Ontario during September 2002, even though the average price over the month was $83/MWh, it peaked at $1028/MWh, more than twelve times the average. Price spikes reflect scarcity and are a feature, not a flaw, of a well-functioning market. However, dramatic price spikes often create consumer pressure on governments to intervene and reduce volatility by implementing caps. In Alberta, the government capped wholesale market prices at $1000/MWh (Brown and Olmstead, forthcoming). Ontario's maximum wholesale market price is set at $2000/MWh.

One consequence of such intervention is that it can create a "missing money problem" for generators. As one electricity market expert noted, "The missing money problem arises when occasional market price increases are limited by administrative actions such as price caps. By preventing prices from reaching high levels during times of relative scarcity, these administrative actions reduce the payments that could be applied towards the fixed operating costs of existing generation plants and the investment costs of new plants" (Hogan, 2005, pg.1). By limiting the opportunities for generators to recover fixed costs, price caps can act as a disincentive for generators to invest in new capacity.

A second risk for generators is that if markets develop excess generation capacity, wholesale prices will be pushed down towards variable costs, preventing generators from recovering fixed investment costs, which can be large given the capital-intensive nature of electricity production (Borenstein, 2002). Anticipating that future market conditions could change, generators may be unwilling to invest in new capacity—even if current levels are not fully sufficient to meet demand—when costs can only be recouped through wholesale market revenues. Such risks are magnified in institutional environments where government entities can rapidly implement sweeping regulation or policy changes, as in parliamentary systems with majority party control.

For these and other reasons, wholesale electricity market prices often do not send accurate signals to producers or consumers regarding efficient production and consumption behaviour, nor need they create the competitive incentives for generators to make sufficient long term investments in capacity for reliable supply within a jurisdiction, especially in generation technologies that have high average costs relative to variable costs (e.g. renewable fuels) or that have very long payback periods (e.g. nuclear power). This means that governments, even in deregulated markets, often rely on complementary policy mechanisms to enable generators to recover their fixed costs of electricity generation and to remain in the market. Long-run power purchase contracting, which effectively mimics average cost pricing, has been a common approach in many jurisdictions, as have been separate capacity markets (Biggar and Hesamzadeh, 2014). Invariably, however, additional policy instruments do not operate independently but have spillover effects on generator incentives, introducing further complexities and distortions in the operation of wholesale markets.

ONTARIO'S GENERATION SECTOR AND WHOLESALE MARKET

Background

Over the last half century, several structural shifts have fundamentally changed the nature and cost profile of Ontario's electricity generation sector. Major nuclear generating capacity was brought online during the 1960s to 1980s, transforming baseload generation in the province. Construction costs proved to be significantly greater than expected, however, leading to rate increases of more than 30% in the early 1990s, shortly followed by a rate-freeze imposed by a new (NDP) government in 1993 (Trebilcock and Hrab, 2005).[1]

The second structural change occurred in the late 1990s and early 2000s when the province, in concert with many other jurisdictions that were seeking greater electricity sector efficiencies, experimented with market deregulation and restructuring. In May 2002, the Progressive Conservative government launched a competitive wholesale

[1] The rate freeze remained in place until the Government launched the competitive retail market in 2002.

electricity market and a short-lived competitive retail market. Hot summer temperatures combined with a shortage of generation capacity triggered wholesale price spikes and rapid increases in consumer bills (Trebilcock and Hrab, 2005, pg. 126). Yielding to public pressure to reduce 'rate shock', the government quickly reversed course, closing the retail market in November 2002, implementing a rate freeze, and shelving plans for privatization and restructuring of state-owned generation assets. The government retained the wholesale market with the expectation that it would encourage private investment in new generation capacity.

The third structural shift began in the mid-2000s under a newly-elected Liberal government that sought to rebuild the supply portfolio to address a generation shortfall, and also to rebalance the supply mix, notably by reducing the share of coal generation while phasing in renewable sources such as wind and solar.[2] Since the private sector was reluctant to invest in merchant generation assets, the government created the Ontario Power Authority (OPA) in 2004 to enter into long-term power purchase contracts with generators, operating under the direction of the Minister of Energy. To expedite the government's policies and to avoid repeating the 2002 summer-time supply shortages, the government implemented a series of long-term contracting programs for specific types of generation technologies, including through competitive procurements, standard offer or feed-in tariff programs, and bilateral negotiations with private generators. Under each of these mechanisms the government guaranteed to buy power at a fixed unit rate over a specified time period, commonly 20 years.[3]

Since 2005, the OPA (now the IESO) has contracted for approximately 6,000 MW of wind capacity and more than 2,600 MW of solar capacity (IESO, 2016a). In total, the IESO has contracted for more than 27,000MW of energy. Ontario Power Generation (OPG) controls significant additional nuclear and hydroelectric capacity whose rates are regulated by the Ontario Energy Board.

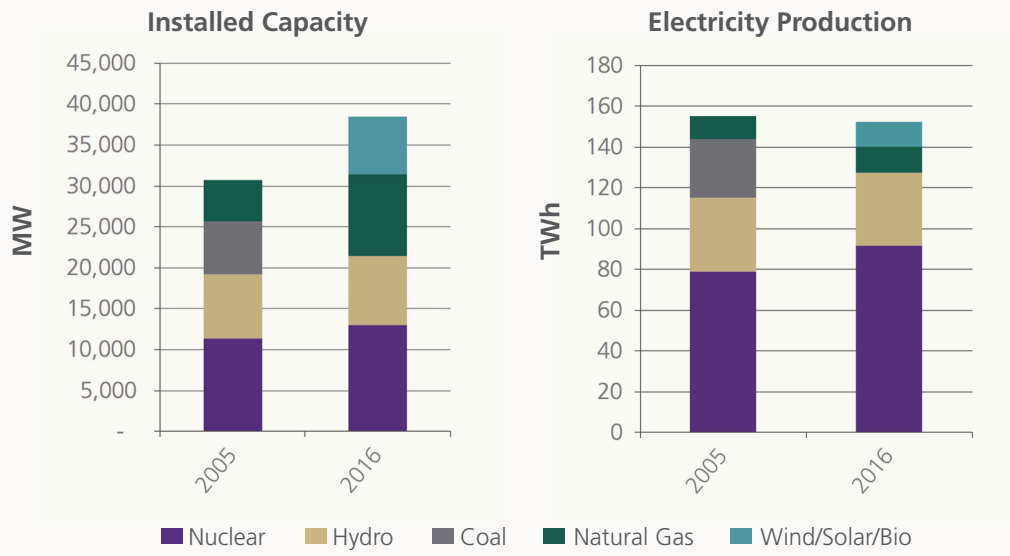
Figure 1 shows how the province's generation profile, including both contracted and regulated components, has changed over the eleven year period since 2005. Overall, the province expanded its installed generation capacity by a net 8,000 MW, increasing to a total of approximately 38,500 MW in 2016. Nuclear power has remained the single largest component, accounting for 11,400 MW in 2005 (37% of total capacity), increasing to 13,000 MW in 2016 (34%). Hydroelectricity was the second largest component in 2005 at 7,900 MW (26%), and has increased marginally to 8,500 MW in 2016 (22%). The most significant changes have been in renewable and natural gas generation. Wind, solar and bio-energy power sources added 7,100 MW over the eleven year period, and accounted for 18% of total installed capacity in Ontario in 2016. Natural gas installed capacity doubled between 2005 and 2016 (adding approximately 5,000 MW), increasing its share from 16% to 26%. Coal, which accounted for 21% of capacity in 2005, was eliminated from the supply mix by April 2014.

In terms of electricity production, overall power output in the province decreased marginally from 155 TWh in 2005 to 152 TWh in 2016. Nuclear accounted for the majority of output (92 TWh, 60% of overall output in 2016), and has increased both the absolute amount and its share of output since 2005. Hydroelectric power generation has remained steady at 36 TWh, and is the second largest component of overall output (23% in 2005 and 2016). Wind, solar and bio-energy accounted for approximately 8% of power output in 2016 (12 TWh). Natural gas output increased marginally between 2005 and 2016, despite the doubling of capacity, and accounted for about 8% of total output in 2016.

[2] Electricity Conservation and Supply Task Force, Final Report to the Minister, January 2004

[3] Contracts for natural gas generation were more complex and included clauses for fixed monthly payments.

Figure 1: Installed Capacity and Electricity Production by Fuel Type, 2005 and 2016



Source: IESO Supply Mix data and Ontario Power Authority 2005 Supply Mix Advice.

Investment in new generation capacity since 2005 has been supported in large part by long-term contracts with private generators that specify a fixed purchase price for energy produced (e.g. $135/MWh for wind power under the FIT program), though they are structured as 'contracts for differences', which provide two related components of revenue for the generators. The first component consists of the prevailing wholesale market price for power, referred to as the 'Hourly Ontario Energy Price' (HOEP). Since wholesale prices may be less than the contracted rate, the second component is the difference between the agreed contract rate and the wholesale price, and is included in the 'Global Adjustment' generation charge. The Global Adjustment consists of the costs of payments to contracted generators, as well as the costs of conservation expenditures, and payments to regulated generators. It exists because, in general, market-based revenues are insufficient to cover the full costs of contracted or regulated generation. The combination of the Global Adjustment and the Hourly Ontario Energy Price effectively represents average cost pricing, enabling generators to recover their variable and fixed costs.

Wholesale Electricity Market

Ontario's wholesale electricity market operates as a mechanism for dispatching generation units in order to ensure a reliable and continuous supply of electricity. The wholesale market price—the HOEP—is determined by offers submitted in advance by generators that specify the amount of power they are willing to provide and the offer price. The HOEP is the hourly average of twelve five-minute market-clearing prices that balance supply and demand. The five-minute market-clearing price, and ultimately the HOEP, is based on the offer of the marginal generating unit, and all dispatched generators, regardless of their offer, receive market revenues at the market-clearing price. Generators that submit offers greater than the five-minute market-clearing price are not dispatched and do not receive wholesale market revenues.

Since 2005 there has been a declining trend in the hourly energy price on the wholesale market, as illustrated by

Figure 2. Contributing factors include falling natural gas prices, lower demand for electricity within the economy, and expansion of generation capacity with low to zero marginal costs such as wind, solar and hydro. In the eight year period 2009 to 2016, the hourly energy price averaged $28/MWh, significantly below the average total cost of virtually any type of generation technology. Such wholesale prices are insufficient by themselves to incent investment in new dispatchable generation capacity, for instance natural gas, which is needed to complement the growth of intermittent renewable generation.

The decline in Ontario's wholesale market price does not necessarily imply that the average cost of generation has also declined, nor is the wholesale price necessarily an indicator of the average generation cost at any point in time. Two explanations are germane: first, in generation markets with excess capacity, such as in Ontario, wholesale prices are largely determined by variable or marginal production costs, not by average costs which additionally reflect fixed capital costs. A significant presence of renewable resources, which have low variable costs, further drives a wedge between wholesale prices and average costs.

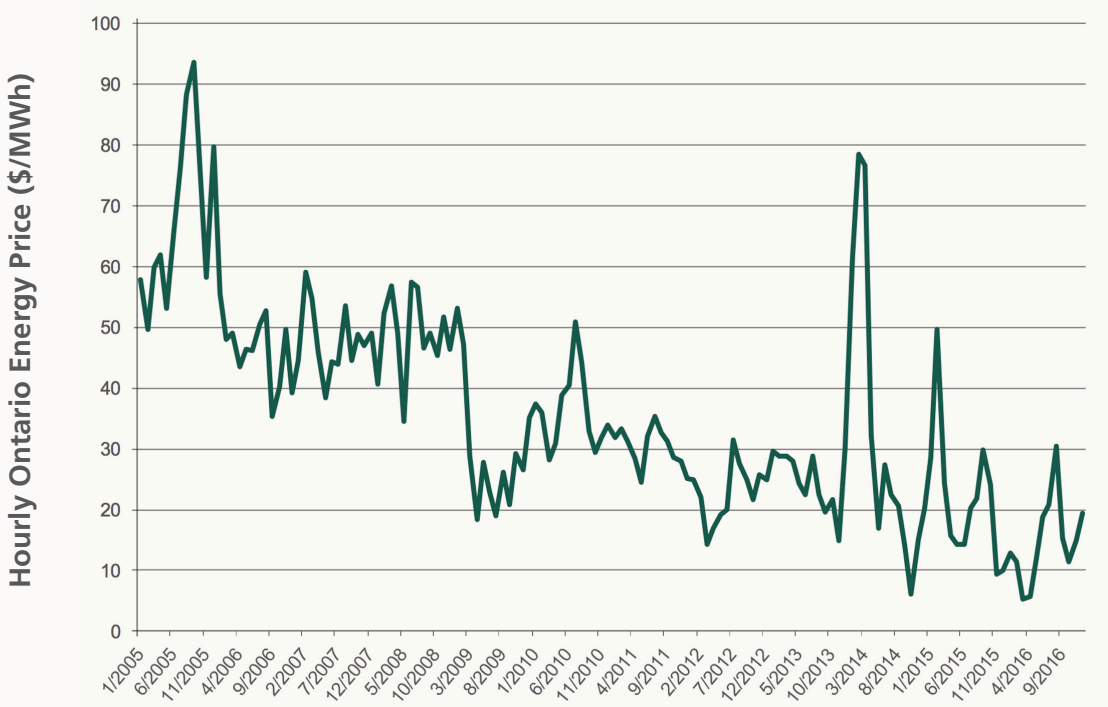
Second, strategic behaviour by generators can distort wholesale prices below even their marginal costs of production. For instance, before September 2013, renewable generators such as wind and solar were at times submitting offers to the market at prices equal to -$2000 per MWh. Notionally, an offer of -$2000 per MWh suggests that wind generators are willing to pay the operator $2000 per MWh dispatched, an unlikely proposition. In reality, wind generators knew that they were guaranteed to receive their contracted, fixed power purchase rate per MWh and wanted to ensure their power gained a favourable position in the merit order and was dispatched. Due to such strategic bidding behaviour by generators, between 2009 and 2014, the HOEP was negative for almost 2000 hours (equivalent to 83 days).[4] In response, in late 2013 the IESO established floor prices for transmission-connected wind and solar generation offers at -$10 per MWh for the first 90% of capacity (subsequently increased to -$3 per MWh) and -$15/MWh for the remaining 10% (Navigant, 2014b). Similarly, manoeuvrable nuclear generators have an offer floor of -$5 per MWh to limit strategic bidding. These examples illustrate that generators are not necessarily offering their production cost, but instead are adjusting their offers in accordance with the terms of their fixed price contracts.[5]

In this sense, generators' long-term purchase contracts can distort the wholesale market price since they reduce the incentives for generators to make offers in the wholesale market based on their cost of production. While the wholesale market price does not provide a perfect economic signal to producers and consumers, this does not imply that the wholesale market dispatch mechanism operates inefficiently over the short-term. Provided that the dispatch merit order is maintained, the five-minute market-clearing price still sends a reasonably accurate signal for short-term dispatch, and generally ensures that lower cost sources of electricity are dispatched before higher cost sources.

[4] Annual Report of the Office of the Auditor General of Ontario, 2015, page 216.

[5] In a slightly different context, Harvey (2013, pages 1-2) states that the hourly Ontario energy price "does not reflect the actual cost of meeting load … and therefore does not send an accurate signal for longer term decisions, such as the entry or exit of generation or of particular types of generation, for increases or decreases in power consumption, or for generators and dispatchable loads." Moreover, no entity in the province purchases electricity via the wholesale market (Alpin, 2017).

Figure 2: Hourly Ontario Energy Price



Source: IESO

THE COST OF GENERATION IN ONTARIO

The cost of contracted generation, which accounts for the majority of capacity in the province, is approximated by the sum of the wholesale market hourly spot price and the Global Adjustment amount, which acts as a full cost recovery mechanism (MacDougall, 2012).[6]

The formal description of the Global Adjustment is outlined in Ontario Regulation 429/04.[7] Officially, it is a payment variance that reconciles the difference between the earned revenues in the wholesale market and the rates established via contract. The relationship between the hourly Ontario energy price and the Global Adjustment may be characterized as a seesaw. When the hourly Ontario energy price goes up, the Global Adjustment goes down; and when the hourly Ontario energy price decreases, the Global Adjustment increases. This relationship is automatic and mechanical. Importantly, this seesaw relationship implies that neither the wholesale price nor the Global Adjustment by themselves provide an accurate 'market signal' to consumers or generators. Further, it is incorrect to interpret the Global Adjustment as an overpayment or 'above-market' payment for generation, as some commentators have claimed, since the wholesale price is not a true market price as would be observed in

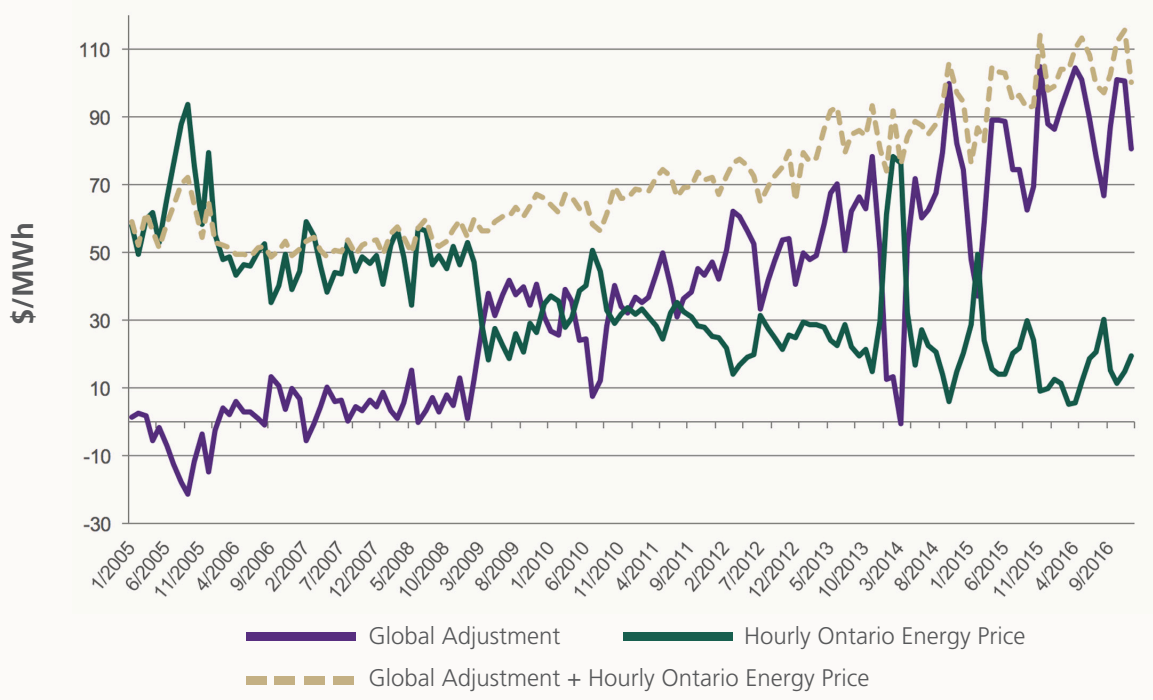
[6] Non-contracted generation includes Ontario Power Generation's nuclear and hydro electricity assets which have rates established through cost-of-service regulation.

[7] Section 1(1) of 429/04 precisely presents the calculation of the Global Adjustment.

normal competitive markets. The appropriate counterfactual for Ontario prices is less obvious than it might seem at first inspection and needs to be formulated as the inclusive price that covers both variable and fixed costs in the absence of policy intervention.

Figure 3 illustrates the hourly Ontario energy price and the unit Global Adjustment amount from 2005 to 2016. The hourly Ontario energy price is calculated as an hourly average of 5-minute dispatch prices, which are determined in the real-time market. The Global Adjustment is calculated monthly, and is based technically on the difference between the hourly Ontario energy price and (i) IESO's contracts with generators, (ii) contracted rates administered by the Ontario Electricity Financial Corporation, and (iii) OPG's regulated nuclear and hydro generation rates (IESO, 2016b). The seesaw or inverse relationship between the Global Adjustment and hourly wholesale energy price is immediately obvious in the Figure.[8] While the hourly price has steadily declined since 2005, albeit with natural monthly variation, the Global Adjustment has increased over the same period, mirroring monthly movements in the hourly price.

Figure 3: Hourly Ontario Energy Price and Global Adjustment, 2005–2016

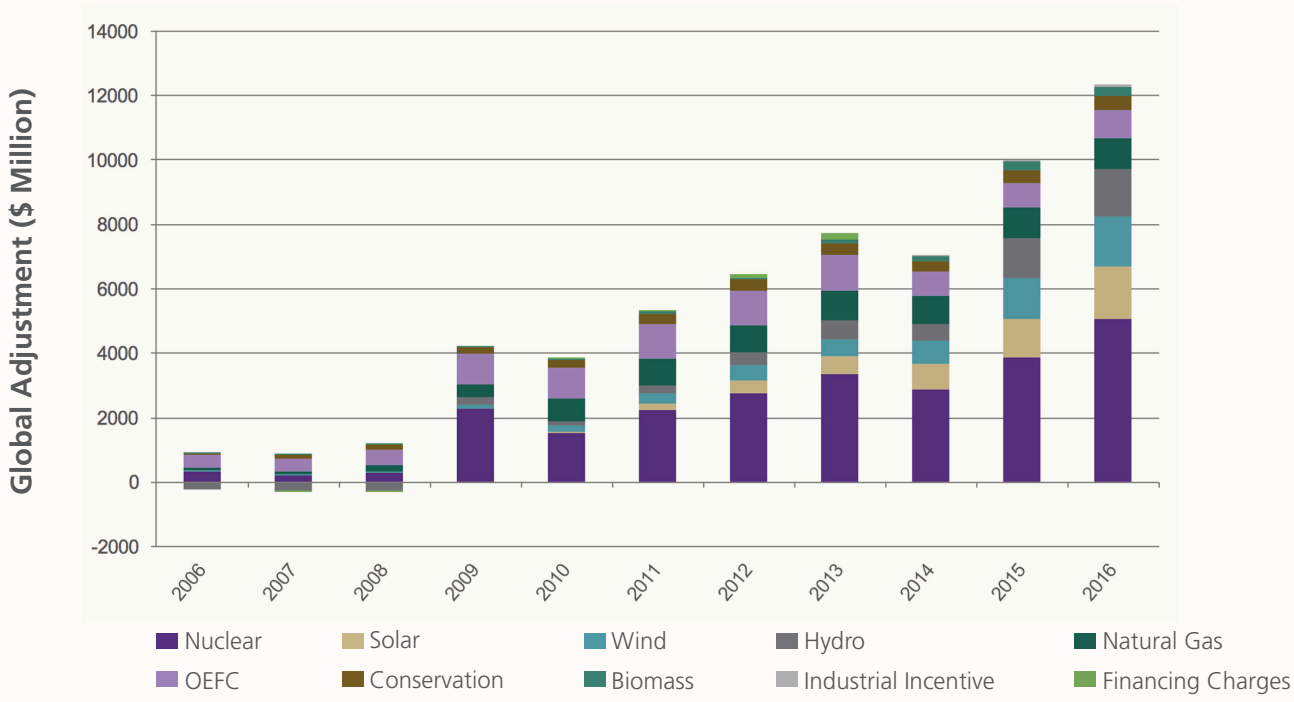


Source: IESO

[8] The relationship is not a perfect one-for-one because the Global Adjustment is a true payment variance and hence includes the costs of conservation programs and financing charges. Also because the Global Adjustment shows up in customers' biannual rate plans, the Global Adjustment, in conjunction with the hourly Ontario energy price, induces a small demand response.

Decomposing the Global Adjustment into its components provides some insight into the share of costs attributable to different generation fuels as shown in Figure 4. It does not provide an accurate picture of total generation costs by fuel type since it does not include costs recovered through wholesale market revenues, though these were a minor share in 2016. The overall Global Adjustment was $12.3 billion in 2016. Nuclear accounted for the single largest share of Global Adjustment costs at 41%. Solar and wind power each accounted for 13%, hydroelectric power for 12%, and natural gas for 8%. Other components summed to 13%.

Figure 4: Global Adjustment by Component, 2006–2016



Source: IESO

REASONS FOR GENERATION COST INCREASES

Rates paid for electricity in Ontario have increased despite a steadily decreasing wholesale market electricity price due to corresponding increases in the Global Adjustment as previously described. While a formal analysis of the sources of these rate increases is beyond the scope of this report, it is valuable to briefly review some of the underlying reasons for the increase in generation costs.

The average unit cost of generation (per MWh) is represented by the dashed line in Figure 3, the sum of the hourly wholesale price and Global Adjustment. From 2006 until 2009, the average cost was relatively stable, remaining between $50 and $60/MWh. Since 2009 there has been a continuous upward trend in the average cost of generation, reaching more than $110/MWh by late 2016. Several factors have contributed to this trend:

Phase out of low cost coal-fired generation. Between 2005 and 2014 Ontario gradually phased out all coal-fired plants, which provided 25% of power generation in the province at a relatively low unit cost (approximately $48/MWh). The coal fleet was reaching the end of its productive life, and new capital investment required to replace it would have increased system-wide costs of generation, and hence rates, regardless of the replacement type of generation fuel. For example, the refurbishment of Bruce Power nuclear units, which provide base load power, yields power at a contracted rate of $66/MWh. Offsetting higher costs, however, are health and environmental benefits from switching from coal to less emission-intensive fuel sources.

Increasing share of renewable fuels. The 2009 *Green Energy and Green Economy Act*, and initiatives such as the Renewable Energy Standard Offer program launched in 2006, have led to the development of a significant amount of wind, solar, hydroelectric, and bio-energy capacity, supported by fixed feed-in tariffs guaranteed for 20 years. Between 2005 and 2016, the province added approximately 7,100 MW of new wind, solar and bio-energy capacity, accounting for 18% of installed capacity in 2016. The rates paid for renewable power are greater than rates paid for nuclear and hydroelectric power which provide the bulk of electricity for the province, for instance ranging from $135/MWh for on-shore wind to $443/MWh for ground-mounted solar PV under the 2012 FIT pricing schedule. Power purchase prices for new solar capacity have since declined as technology costs have fallen steeply, but remain above levelized unit costs for natural gas and nuclear power. In addition to higher direct costs, the expansion of renewable generation capacity has required complementary investment in transmission and distribution sector upgrading, an indirect cost implication for the electricity system.

The Ontario Energy Board provides annual estimates of average generation costs by fuel type based on total payments to generators operating under all contract and regulation mechanisms. The OEB's 2016-17 estimates illustrate the higher average cost of wind, solar and bio-energy relative to nuclear and hydro (see Table 1). It is notable that the average cost of natural gas power is greater than wind and bio-energy power, despite low wholesale gas prices, which may be account for the low capacity utilization of natural gas generation assets.

Table 1: Average Costs of Generation per MWh by Fuel Type

Generation Fuel	Average Unit Cost ($/MWh)
Nuclear	66
Hydro	58
Natural Gas	173
Wind	140
Solar	480
Bio-Energy	131

Source: Ontario Energy Board Regulated Price Plan Report, November 2016 to October 2017. Hydro excludes NUGs and OPG non-prescribed generation. Gas includes Lennox, NUGs and OPG bio-energy facilities.

Overall growth in installed generation capacity. Expansion of the province's generation portfolio began in the early 2000s when the economy was growing robustly and when there were heightened concerns about supply outages, especially following the major regional blackout in Ontario and the north east U.S. in August 2003. In addition, given the shift towards renewable power generation, which is intermittent, the province needed to invest in complementary natural gas or other dispatchable capacity that could operate during periods when renewable power was not available. Ontario added 5,000 MW of natural gas capacity between 2005 and 2016, much of which provides peak and mid-peak power, to bolster system reliability and to satisfy regional needs. The overall amount of installed capacity in the province has increased significantly over the last decade. In 2016, installed capacity was approximately 38,500 MW – a 25% increase from 30,500 MW in 2005. While capacity has grown, however, overall annual domestic demand for grid power has declined, due to a combination of pricing

effects, weaker economic growth, enhanced conservation efforts, and expansion of distributed energy resources. According to IESO data, grid demand declined by 10% from 2006 to 2015, reflecting, in part, the impact of the 2008 Great Recession. Annual peak grid demand has also fallen sharply, from an all time high of 27,000 MW in August 2006 to 22,500 MW in 2015. While long-term forecasting of electricity demand is notoriously difficult, the province has invested in new generation capacity that has proved to be in excess of typical needs, contributing to higher system-wide costs and consumer bills.

SMOOTHING CONTRACTED GENERATION COSTS

The rapid pace of contracting for new generation capacity since 2005 has contributed to a corresponding escalation in consumers' electricity bills. Over the last decade, regulated electricity rates for residential consumers have almost doubled, creating a degree of 'rate shock' and leading to calls for generation market reform. While the government has taken some heat for rising bills, there is a potential policy solution that is economically rational and relatively simple to implement. The government could smooth the costs of contracted generation capacity—which account for more than half of electricity system costs—over a longer period of time than is currently planned, reducing consumer bills in the short to medium term in return for slightly higher bills in the long term. This is akin to household mortgage refinancing that lowers monthly payments by extending the term.

The economic rationale for such a smoothing policy is that the useful productive lives of contracted generation assets—payments for which constitute the bulk of Global Adjustment charges—are in many cases longer than the durations of the contracts. For instance, wind power RESOP, FIT and LRP contracts are structured for 20 years, even though wind turbines and equipment may be expected to operate for 30 years or longer, assuming periodic maintenance and refurbishment is undertaken. Similarly, natural gas generation contracts are generally for 20 year periods, though in the U.S. gas plants have often been retired after 40 years. Besides wind and natural gas, there may be additional generating assets that present opportunities to smooth costs for consumers. Under 20 year contracts, generator capital costs are amortized too quickly relative to the useful life, leading to higher annual capital charges than would be the case if the amortization period was extended to the full expected life span.[9] Charges to consumers for contracted generation could hence be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged on consumer bills would more closely reflect the true economic costs of the assets.[10]

There are three possible methods to accomplish generation cost smoothing in Ontario, recognizing that many new contracts with generators have already been signed over the preceding 12 years.

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[9] Generators have strong incentives to fully amortize fixed capital costs over the duration of the contract, and to build these costs into competitive supply bids, even if the contract duration is shorter than the expected lifespan of the asset. Once a generation facility is constructed it becomes a physically sunk asset, leaving the generator with considerably reduced bargaining power at the end of contract. Even if the government wishes the generator to continue operating after the end of the contract, it may offer to purchase power only at the variable or operating cost of production, providing minimal opportunity for the generator to recoup sunk fixed capital costs. As long as the purchase price at least covers variable costs, it is rational for the generator to accept the government's terms and to operate.

[10] The same smoothing principle could be applied to other generating assets where contract durations are less than expected asset lifespans. It is also applicable for expenditures on conservation projects, which can involve upfront investments in capital assets that reduce electricity demand over multiple years. For instance, high efficiency industrial refrigeration compressors are expected to operate for more than a decade. Currently, conservation expenditures are fully recouped in Global Adjustment charges in the year in which they occur. The Ministry of Energy estimates that smoothing conservation expenditures over asset lifespans could reduce electricity system costs in the short term by $300-$500 million.

1. Option for existing generators to bid for new long-term contracts

First, the government could offer generators with existing contracts the opportunity to bid for new contracts that would supersede their current contracts, stipulating that (a) the time horizon for a new contract must extend beyond the current one, and (b) the new purchase price for electricity for the duration of the new contract must be lower than the current contracted rate. If the generator and government reach agreement on new terms the new contract would replace the original one. Otherwise, the original contract would remain in force.

From the generator's perspective, this provides an opportunity to lengthen the time horizon of financial returns on their investment, and to increase the extant expected net present value of the project. It also pre-empts a potentially challenging renegotiation with the government at the end of the original contract when the assets still have productive capabilities but have been fully amortized. From the government's perspective, generation costs would be smoothed over a longer period of time as determined by individual generators on a case-by-case basis, lowering average electricity bills in the short to medium term.

There are several caveats with this approach. First, substantial rate reductions will be achieved only if there is sufficient competitive bidding pressure between generators for contract extensions. Since future demand for electricity in the province may well decrease, the government need not extend all generator contracts, which could create some implicit bidding competition – but the likely degree of competition and downward pressure on rates is uncertain ex ante. Second, the process of negotiating contract extensions could be administratively complex and time consuming for both the government and generators. The government has contracted with thousands of private entities since 2005. Generators would also likely need to renegotiate their own contractual arrangements with a range of parties in addition to the government, including landowners, financiers, local communities, and Aboriginal groups, a complex and uncertain exercise. A third caveat is that providing new long-term contracts to generators could impact the proposed introduction of a capacity market in Ontario if generators became less willing to participate in capacity auctions.

2. Short-term government subsidization of payments to generators

An alternative and potentially simpler approach for smoothing the amortization of generation costs is for the government to subsidize, in the short to medium term, a portion of annual contracted payments to generators operating under existing contractual terms, and to reduce consumer bills by the corresponding amount. The subsidy each year would equal the difference in annual amortization currently charged (based on the contract duration) and the annual amortization amount calculated using the productive life of the asset. Interest rates on government debt (which would fund the short-term subsidy) are currently very low (2.4% on Ontario's recent 10-year bond issue), making this a relatively cost-effective strategy, though it would increase public sector debt. Generator contracts would be unchanged in this scenario. An advantage of this approach is that it avoids the administrative cost and uncertainty of renegotiating in a short time period multiple contracts on an individual basis with generators, and it can be implemented relatively rapidly. On the other hand, the government would ultimately still need to negotiate new contracts with generators when existing ones expire in the future, in order to ensure that generation assets continue to operate, where needed, beyond 20 years.

In both approaches, the quid pro quo is that consumers would pay more for electricity in the future to reflect the longer amortization period, specifically during the years beyond the end of the original contract and up to the useful life of the generation assets. Generator refurbishment and maintenance costs may also increase for older assets, implying upward pressure on rates when generator lives are extended beyond anticipated contract end dates.

3. Long-term contracting policy

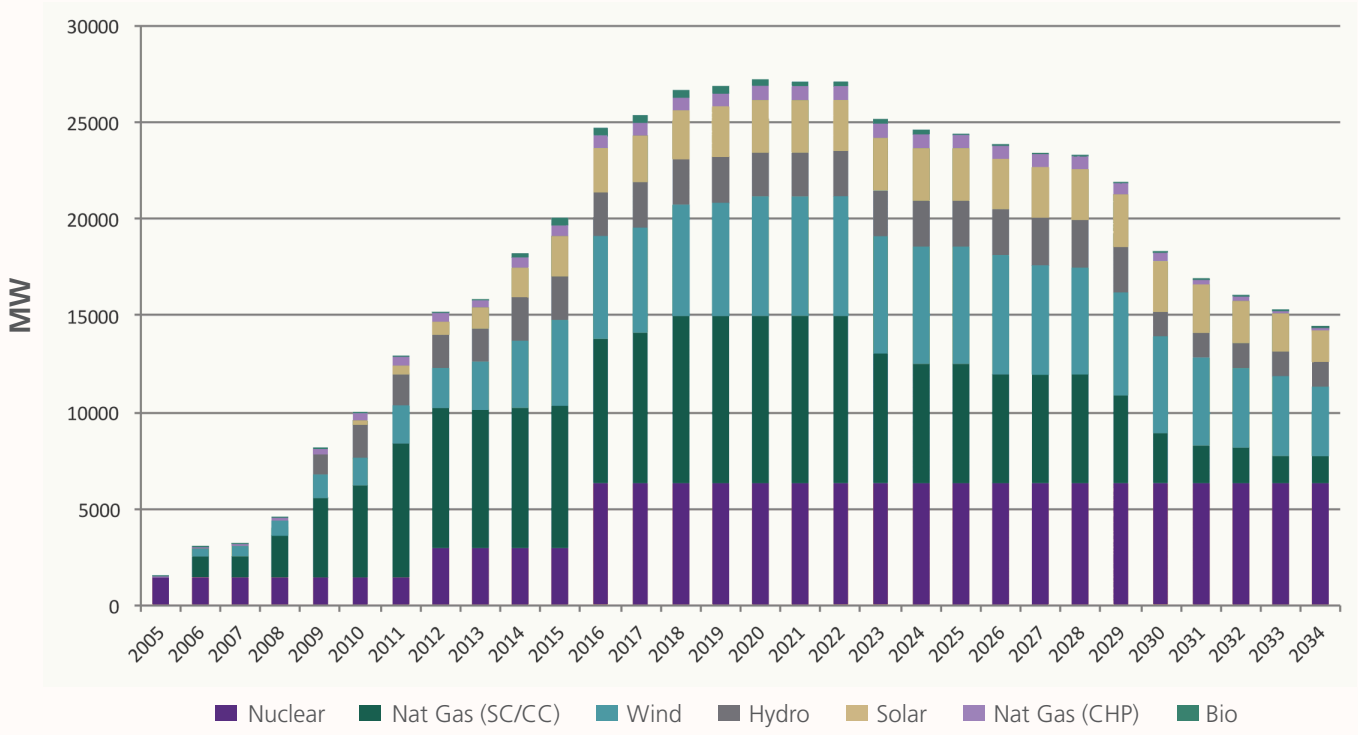
In future contracting exercises for new generation capacity, the government could invite generators to submit bids that include the proposed contract duration, and evaluate such bids on the basis of contract duration as well as on purchase price and other factors. Providing flexibility on duration would encourage generators to match the contract period to the expected productive life of the asset, resulting in (lower) annual amortization costs that reflect the true economic cost.

Preliminary Estimate of Impact of Smoothing Contracted Generation Costs

Estimating the potential impact on electricity bills from stretching out generation asset amortization periods requires detailed information on the terms of generator contracts, which are not publicly available. Assumptions based on available Ontario Energy Board (OEB) and IESO data, however, can lead to approximate calculations, albeit with circumscribed confidence in their accuracy.

Since 2004 the Ontario government has contracted for a significant amount of new generation capacity through competitive procurement exercises, bilateral negotiations, and feed-in tariff programs. By 2006, approximately 3,000MW of newly contracted capacity was operating; by the end of 2016, almost 25,000MW of contracted nuclear, natural gas, hydro, wind, solar, and bio-energy capacity was in place, representing a dramatic increase in procurement over a 10-year period. New procurement is expected to slow down in the coming years, reaching a peak of 27,000 MW accumulated contract capacity in 2020.

Figure 5: Contracted Generation Capacity by Fuel Type, 2005–2034

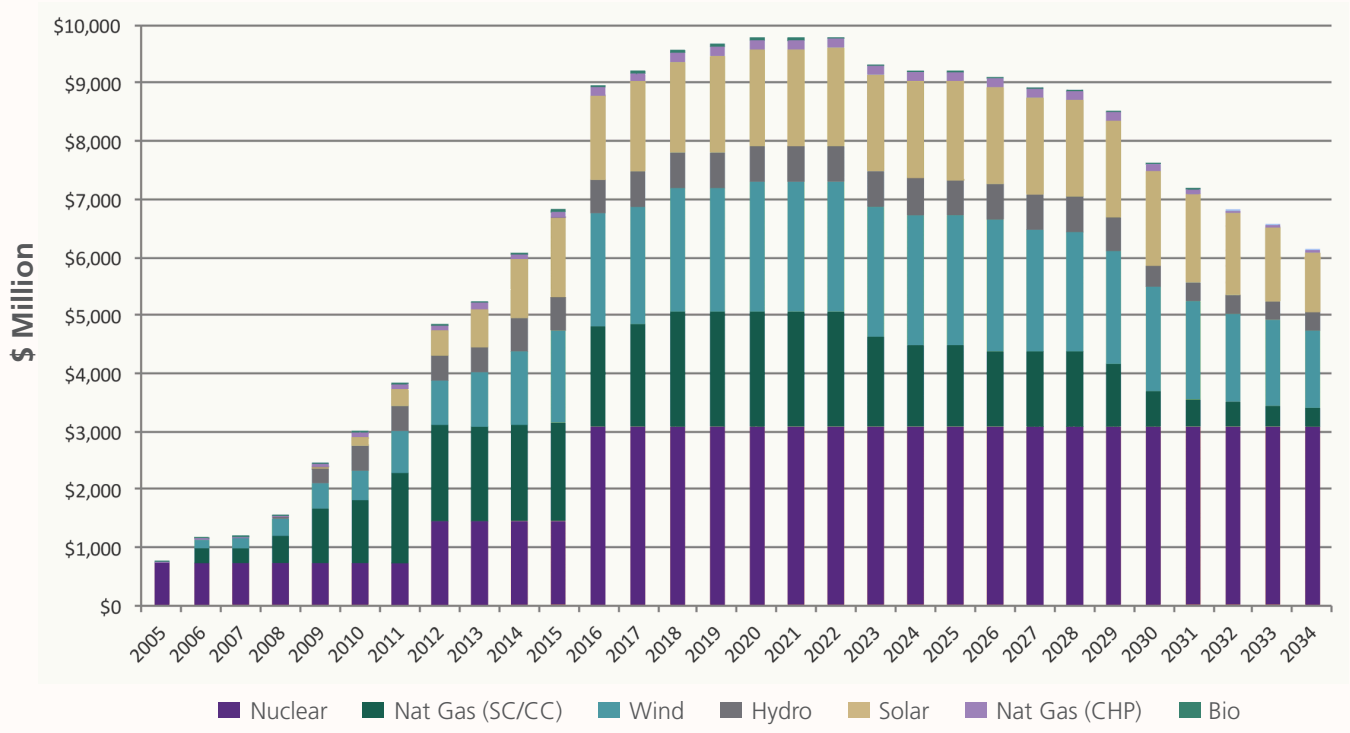


Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016. 'Other' fuel category omitted for simplicity.

Figure 5 shows the amount of accumulated contracted capacity for each fuel type for the 30-year period from 2005 to 2034. There has been a significant increase in contracted natural gas generation (representing 33% of total contracted capacity in 2017), as well as in nuclear (25%) and wind (22%). Solar, hydro, bio-energy and other fuels account for the remaining 20% of the 2017 total. OEB data on the average unit cost of electricity by fuel type, and IESO data on capacity utilization, leads to approximate estimates of the annual cost of contracted generation capacity.[11] In 2016, payments to contracted generators are estimated to have totalled approximately $9 billion. The estimated costs of contracted generation by fuel type are shown in Figure 6.

An important feature of Figures 5 and 6 is that they chart the contractual duration of capacity, not the useful productive lifespan of the generating assets. According to the IESO, contract terms vary from 5 to 21 years for bio-energy to 31 to 57 years for nuclear units. For natural gas and wind generation, as well as solar, contract periods appear to be somewhat shorter than typical estimates of expected lifespans (see Table 2), though lifespan estimates depend on a multitude of factors such as the specific technology type within a broad category, capacity utilization, and climate conditions. Some caution must thus be used in applying average industry lifespans to the specific case of generators in Ontario.

Figure 6: Estimated Cost of Contracted Generation, 2005–2034



Source: Author estimates. 'Other' fuel category omitted.

[11] Average effective power purchase rates per MWh for each fuel type are assumed to be as calculated in the OEB's Regulated Price Plan Report, November 2016. Rates range from $58/MWh for hydroelectric generation to $480 for solar. The same rates are applied each year in the analysis, though it is expected there will be variation in practice due to the changing mix of generation contracts with different purchase terms. Capacity utilization is estimated based on IESO reported installed capacity availability and actual power production for each fuel type in 2016 (http://www.ieso.ca/Pages/Power-Data/Supply.aspx)

Table 2: Durations of Generator Contracts and Expected Asset Lifespans[12]

	IESO contract duration (range)	IESO contract duration (mid point)	IEA lifespan estimate[13]	EIA lifespan estimate[14]
Natural Gas	10–20 years	15 years	30 years	30 years
Wind	20	20	25	30
Nuclear	31–57	44	60	
Hydro	20–50	35	80	
Solar	20	20	25	30

Source: IESO Progress Report on Contracted Electricity Supply, Third Quarter 2016.

Nonetheless, estimates of the impact of smoothing generation costs on consumer bills can be calculated under hypothetical scenarios where generator lifespans are assumed to extend to 30 years for natural gas plants and wind farms, and 25 years for solar PV (existing contracts are assumed to all be for 20 years). We do not model contract extensions for nuclear power given the specific nature of CANDU technology, or for hydroelectricity, bio-energy or CHP which are a relatively small share of total contracted capacity costs.

By the end of 2017, contracts for natural gas generation will be an estimated 8 years old on average, implying that 40% of original capital costs will have been amortized. Amortizing the remaining 60% of capital costs over the next 22 years instead of the originally-planned next 12 years suggests a reduction of up to 45% in annual natural gas generator capital charges may be possible in 2018. For wind power contracts, which will be on average 5 years old in 2017, the equivalent potential reduction in annual capital charges is up to 40% in 2018, and for solar 25%.[15]

In 2018, the total value of reductions in natural gas, wind and solar generation capital charges is estimated to be in the range of $1.5–$2.0 billion (see Figure 7), equivalent to approximately 8% of total expected electricity system costs. The amount of the annual reduction declines gradually over time in part due to interest costs on debt for the accumulated subsidy.[16] Additional asset refurbishment expenses in the latter part of the lifespan of generation assets would also reduce the amount of annual savings. After 2030, bills are forecast to be higher for several years than they would have been without smoothing.

[12] Retirement ages of generation plants also indicate lifespans. In the U.S., natural gas plants have often reached more than 40 years before retiring (Powell, N. America's Ageing Generation Fleet. Power magazine, 28 January 2013).

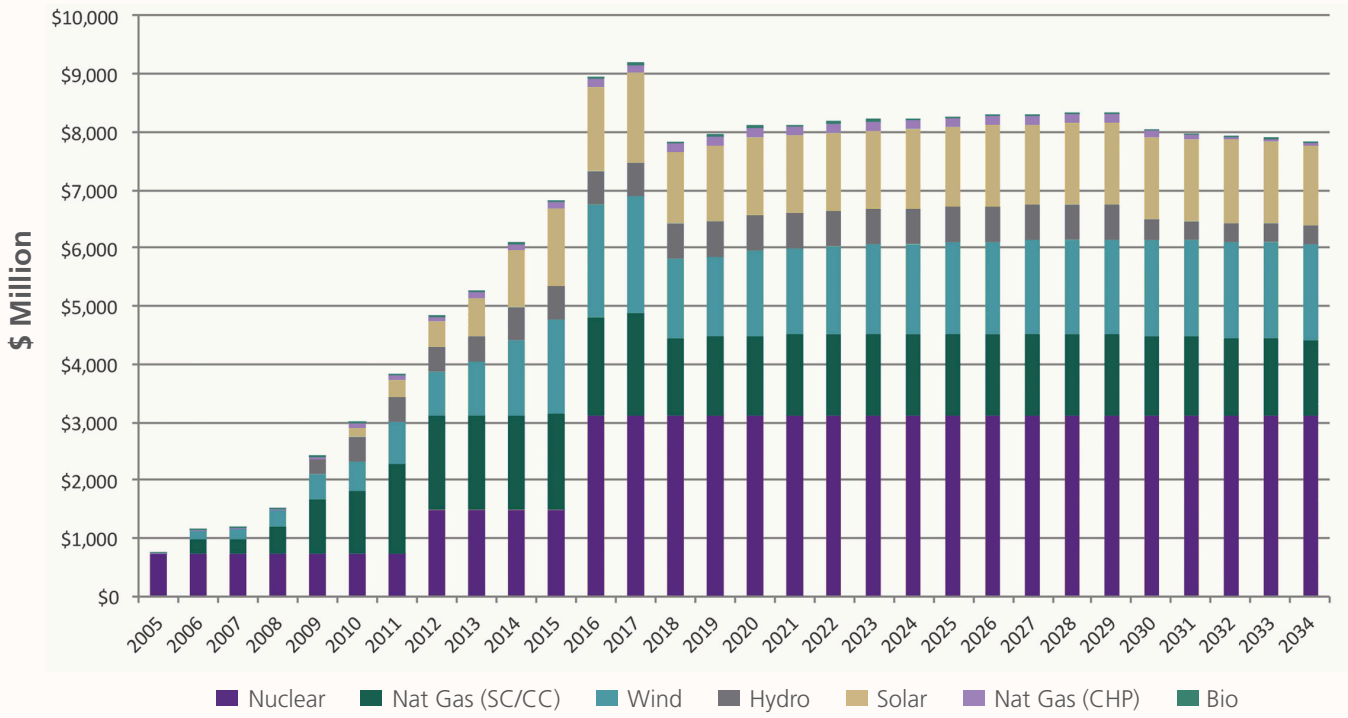
[13] International Energy Agency. 2015. Projected Costs of Generating Electricity.

[14] Energy Information Administration. 2016. Levelized Cost and Levelized Avoided Cost of New Generation Resources in the Annual Energy Outlook 2016. August 2016.

[15] Smoothing is applied only to the assumed capital component of unit generation costs. For wind and solar power which have zero fuel costs, and relatively low variable operation and maintenance costs, it is assumed that 90% of the power purchase rate is accounted for by capital costs. For natural gas capacity, which is assumed to have an average capacity utilization rate of 15% based on IESO data, and an average effective power purchase rate of $173/MWh (based on OEB estimates), the capital cost share is assumed to be 70%. Lower capital cost percentages would reduce the impact on current consumer bills of a smoothing policy.

[16] The interest rate on long-term debt is assumed to be 2.4%, which is the most recent rate on 10-year Ontario government bonds. Annual interest charges on the accumulated debt are assumed to be paid in full in each year by ratepayers through inclusion in electricity bills.

Figure 7: Estimated Smoothed Cost of Contracted Generation, 2018-2034



Source: Author estimates. 'Other' fuel category omitted.

These estimates are preliminary and reflect the specific assumptions of the model. Alternative assumptions would naturally lead to larger or smaller reductions in near-term contracted generation costs. They are also calculated for option (2) above in which the government finances the smoothing of contracted generator payments over an extended period, leaving original contracts unchanged. The alternative approach outlined in option (1), where generators bid competitively for new long term contracts that supersede existing ones, may deliver similar savings if all contracted generators participated and agreed to equivalent reductions in power purchase rates.

While smoothing generation costs can ease the transition for current households and firms to a higher cost electricity system, there are risks and limitations associated with such a policy. One risk is that future changes in markets, technologies, government policy, or demand for electricity may reduce the need for longer-lived generation capacity, potentially creating future stranded costs. In addition, an important consequence of smoothing is that it raises questions about inter-generational equity since consumers in the long-term future will contribute towards a larger share of generation capital costs, and consumers will also pay interest costs associated with short-term subsidization of rates. Some commentators have advocated for the status quo, citing the imposition of interest costs on future consumers as inequitable. However, the corollary to this argument is that the current approach of amortizing generation capital costs too quickly relative to expected lifespans is effectively a subsidy by current ratepayers of future consumers, who would have usage of the assets but not have to contribute to their capital costs. In addition, as economic growth continues, future generations will be wealthier than today, making any given level of electricity costs more affordable.

CONCLUSION

Wholesale electricity markets in many jurisdictions exhibit a variety of imperfections that affect investment, production, and consumption decisions. Wholesale market prices for electricity, including in Ontario, often do not provide an accurate representation of the full economic cost of production, which consists of short-run variable costs (e.g. fuel costs) and long-run fixed capital costs. Wholesale prices are often determined instead by short-run variable costs, especially in environments where there is excess generation capacity, implying that additional mechanisms—such as long-term power purchase contracts—are needed to enable generators to recover their full costs.

Since 2006, the hourly market price for electricity in Ontario has steadily fallen, owing to a decrease in demand and the addition of new capacity resources with low short-run variable costs. At the same time, the underlying cost of generation has increased as the province has made investments in new and refurbished capacity to ensure system reliability and to replace coal, and also added wind and solar supply—which are more costly than nuclear, hydro-electric, and coal generated power—in order to achieve environmental goals. The full cost of generation is reflected in the sum of the hourly wholesale market price (HOEP) and Global Adjustment, which enables generators to recover both short-run variable and long-run fixed costs of electricity production. The Global Adjustment is thus an important component of ensuring a well-functioning generation sector.

Despite the rapid escalation in generation costs that Ontario has experienced since 2005, there is an economic rationale for smoothing rates and reducing electricity bills for consumers in the short-run. Amortizing contracted generation capital costs over longer periods to match with the productive lifespans of the assets, which are often longer than the contracted terms, could reduce current electricity system costs by approximately eight percent, a preliminary estimate. Under this approach, the cost of generation charged on consumer bills would more closely reflect the true economic cost of the assets. A policy of smoothing generation costs through government subsidies in the short-term would incur interest charges and would lead to higher bills in the long-term, raising the challenging issue of inter-generational equity.

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From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning; Ronald Kwan
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Wednesday, April 19, 2017 5:17:39 PM
Attachments:	Agenda_Weekly Rate Mitig Implmentation Group_April 20.docx Consolidated - OFHP Matrix - Week of April 18_clean (3).docx

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From: Katona, Keley (ENERGY)
Sent: Wednesday, April 19, 2017 5:10 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken - FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY); Andrew Teliszewsky (ENERGY); Matt Whittington (ENERGY); Baker, Carys (ENERGY); Kyle MacIntyre (MOF); David McLean (MOF); Robert Foster (MOF); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Good afternoon,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 20, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB / Blakes)
    - OPG Update
    - IESO Update
    - OEB Update

2) Other OFHP Initiatives
    - RRRP, OESP and FN (SNAP)
    - Affordability Fund (CRED)
    - ICI (ESPD)

3) Update on Action Items / Policy Matrix

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of April 18, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		
• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation / Regulations • Ministry to look into retaining Navigant for report on long lived assets and associated assessment of value, Ministry to work with OPG to ensure alignment with OPG internal report for its Board • Financing: o How long will IESO hold short term liability (weeks/months); o When and how frequently will OPG purchase the asset from IESO; o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc); o OPG to confirm if it is considering more than one SPV/subsidiary; o OPG to explore tax considerations; o OPG to indicate how it would determine interest rate on sub-debt; o OPG working with the Ministries of Energy and Finance on equity injection mechanics, approvals and valuation approach; and o Ministry of Finance and Energy are working with TD on a non-disclosure agreement <u>Recent Action Items</u> **OPG:** • OPG to continue to work with lead banks / rating agencies / OFA on financing issues • OPG to confirm accounting if OFA were to act as lead order on borrowing • OPG to determine who will finance / hold the asset until it goes to the market	• AG briefing on April 19, 2017 (TBD) • April 28, pens down on Legislation • KPMG and E&Y opinions to be provided by May 1 • OPG Board to meet on May 1 for approval (Note: Sub-Committee meetings will occur in advance) • Approval dates: o TB on May 9 2017; and o LRC/Cabinet on May 10, 2017 • Legislation introduced May 11, 2017: o Opposition Briefing (TBD) • Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	• OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder letter in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member • OPG provided draft letter to OPG Board sub-committee on April 7, 2017 and provided to Ministry for comment. April 13, 2017, Minister of Energy sent letter to the OPG Chair • OPG to develop note on rationale for 51/49 capital structure of the Trust • OPG to confirm proposed tax status of the Special Purpose Vehicle (SPV) • OPG / OFA to comment / report on overall structure and financibility for TB report back **IESO:** • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to discuss LDC issues with OEB **OEB:** • OEB working to finalize RPP rates and release by April 20 **Legislative Drafting:** • LSB / Blakes / OPG / IESO / OEB / Key Ministries will continue to work through legislative drafting issues including asking dealers about whether a rate class can be named as the backstop in legislation instead of individual ratepayers • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature. • LSB to circulate legislation for review and comment over the weekend	

Item	Key Deliverables / Considerations	Timing / Next Steps
	• ENERGY / Blakes / IESO / OEB / OPG / Key Ministries to meet on Monday to work through issues related to legislation • Blakes / LSB to work with MAG on any constitutional law issues <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs • SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each • Ministry to develop briefing note on why LDCs with RRRP continue to track to OEB for rate increases <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 9, 2017 (TBD) • Implementation of expanded program and reduction in RRRP charge is targeted for July 1 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • Legislation to include provision to allow for sharing of data between MCSS and OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • OEB decision this week on removing OESP from bill as of May 1. • SNAP to work with TBS to ensure funds flow from fiscal plan as soon as legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts; o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to use OESP variance (approx. $100 million) to reduce current OESP charge to zero and continue funding existing program until tax changes in place. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 9, 2017 (TBD) • Enhanced benefits and removal of OESP charge will take effect in May 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Ministry to meet with COO on April 26 regarding FN Rate implementation • Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Introduction of FNDC program targeting July 1 2017
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust (“Trust Deed”) • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees • Second meeting of the Advisory Committee is

Item	Key Deliverables / Considerations	Timing / Next Steps
	• April 7, 2017: Hydro One letter to Advisory Committee members to schedule next meeting and ask members to start thinking of qualified Trustees <u>Considerations</u> • Legislative changes not required.	scheduled for April 18, 2017 **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	<u>Recent Action Items</u> • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Ongoing outreach with LDCs being undertaken by IESO.	• Report back to TB/MBC on May 9, 2017 • Effective April 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
	Considerations • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information by March 24, 2017 • March 31, 2017: Ministry submitted responsive materials
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP Recent Action Items • Provide AG technical briefing presentation used in media lock-up	• Preliminary discussion on April 19, 2017 (TBD)

Item	Key Deliverables / Considerations	Timing / Next Steps
	on OFHP in advance of the technical briefing	
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment <u>Recent Action Items</u> • MO to clarify bill presentment expectations with PO (Bill inserts will be ready for July 1 with bill redesign to occur in the Fall) • Ministry to develop deck on bill presentment with high level slides on legislation	• Initial discussion on March 31, 2017

From:	Gadi Mayman
To:	Ken Kandeepan; Mike Manning; Ronald Kwan
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date:	Wednesday, April 19, 2017 5:17:39 PM
Attachments:	Agenda_Weekly Rate Mitig Implmentation Group_April 20.docx Consolidated - OFHP Matrix - Week of April 18_clean (3).docx

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From: Katona, Keley (ENERGY)
Sent: Wednesday, April 19, 2017 5:10 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken - FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY); Andrew Teliszewsky (ENERGY); Matt Whittington (ENERGY); Baker, Carys (ENERGY); Kyle MacIntyre (MOF); David McLean (MOF); Robert Foster (MOF); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Good afternoon,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 20, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB / Blakes)
    - OPG Update
    - IESO Update
    - OEB Update

2) Other OFHP Initiatives
    - RRRP, OESP and FN (SNAP)
    - Affordability Fund (CRED)
    - ICI (ESPD)

3) Update on Action Items / Policy Matrix

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of April 18, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		
• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation / Regulations • Ministry to look into retaining Navigant for report on long lived assets and associated assessment of value, Ministry to work with OPG to ensure alignment with OPG internal report for its Board • Financing: o How long will IESO hold short term liability (weeks/months); o When and how frequently will OPG purchase the asset from IESO; o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc); o OPG to confirm if it is considering more than one SPV/subsidiary; o OPG to explore tax considerations; o OPG to indicate how it would determine interest rate on sub-debt; o OPG working with the Ministries of Energy and Finance on equity injection mechanics, approvals and valuation approach; and o Ministry of Finance and Energy are working with TD on a non-disclosure agreement <u>Recent Action Items</u> **OPG:** • OPG to continue to work with lead banks / rating agencies / OFA on financing issues • OPG to confirm accounting if OFA were to act as lead order on borrowing • OPG to determine who will finance / hold the asset until it goes to the market	• AG briefing on April 19, 2017 (TBD) • April 28, pens down on Legislation • KPMG and E&Y opinions to be provided by May 1 • OPG Board to meet on May 1 for approval (Note: Sub-Committee meetings will occur in advance) • Approval dates: o TB on May 9 2017; and o LRC/Cabinet on May 10, 2017 • Legislation introduced May 11, 2017: o Opposition Briefing (TBD) • Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

Item	Key Deliverables / Considerations	Timing / Next Steps
	• OPG to embed OFA/Energy (as necessary) in their ongoing internal discussions • ESPD, IESO and OPG to continue discussions around refining refinancing modelling • OPG /LSB to work through requirements / help draft a shareholder letter in a form to be determined. OPG to continue to consider requirements for enhanced indemnification for Board member • OPG provided draft letter to OPG Board sub-committee on April 7, 2017 and provided to Ministry for comment. April 13, 2017, Minister of Energy sent letter to the OPG Chair • OPG to develop note on rationale for 51/49 capital structure of the Trust • OPG to confirm proposed tax status of the Special Purpose Vehicle (SPV) • OPG / OFA to comment / report on overall structure and financibility for TB report back **IESO:** • IESO to work with KPMG in the development of a formal opinion once first draft of legislation is available • IESO to work through technical aspects with IT (i.e., operationalizing the back-office functions) • IESO to discuss LDC issues with OEB **OEB:** • OEB working to finalize RPP rates and release by April 20 **Legislative Drafting:** • LSB / Blakes / OPG / IESO / OEB / Key Ministries will continue to work through legislative drafting issues including asking dealers about whether a rate class can be named as the backstop in legislation instead of individual ratepayers • LSB has drafted a letter for the Minister to send to LDCs re: contempt of the Legislature. • LSB to circulate legislation for review and comment over the weekend	

Item	Key Deliverables / Considerations	Timing / Next Steps
	• ENERGY / Blakes / IESO / OEB / OPG / Key Ministries to meet on Monday to work through issues related to legislation • Blakes / LSB to work with MAG on any constitutional law issues <u>Considerations</u> • OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers. • Ongoing legal, accounting and financing risk assessments. • Impact on Electricity Sector Dedicated Income.	
2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs • SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each • Ministry to develop briefing note on why LDCs with RRRP continue to track to OEB for rate increases <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 9, 2017 (TBD) • Implementation of expanded program and reduction in RRRP charge is targeted for July 1 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • Legislation to include provision to allow for sharing of data between MCSS and OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • OEB decision this week on removing OESP from bill as of May 1. • SNAP to work with TBS to ensure funds flow from fiscal plan as soon as legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts; o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to use OESP variance (approx. $100 million) to reduce current OESP charge to zero and continue funding existing program until tax changes in place. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 9, 2017 (TBD) • Enhanced benefits and removal of OESP charge will take effect in May 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Ministry to meet with COO on April 26 regarding FN Rate implementation • Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Introduction of FNDC program targeting July 1 2017
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust (“Trust Deed”) • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees • Second meeting of the Advisory Committee is

Item	Key Deliverables / Considerations	Timing / Next Steps
	• April 7, 2017: Hydro One letter to Advisory Committee members to schedule next meeting and ask members to start thinking of qualified Trustees <u>Considerations</u> • Legislative changes not required.	scheduled for April 18, 2017 **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	<u>Recent Action Items</u> • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Ongoing outreach with LDCs being undertaken by IESO.	• Report back to TB/MBC on May 9, 2017 • Effective April 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
	Considerations • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information by March 24, 2017 • March 31, 2017: Ministry submitted responsive materials
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP Recent Action Items • Provide AG technical briefing presentation used in media lock-up	• Preliminary discussion on April 19, 2017 (TBD)

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	on OFHP in advance of the technical briefing	
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• ENERGY	• Ministry to begin work on bill presentment <u>Recent Action Items</u> • MO to clarify bill presentment expectations with PO (Bill inserts will be ready for July 1 with bill redesign to occur in the Fall) • Ministry to develop deck on bill presentment with high level slides on legislation	• Initial discussion on March 31, 2017

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To:	Ken Kandeepan; Ronald Kwan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Thursday, April 13, 2017 7:08:07 PM
Attachments:	Action Items - April 13.docx

From: Katona, Keley (ENERGY)
Sent: Thursday, April 13, 2017 6:35 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken - FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
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Subject: RE: Rate Mitigation Implementation Meeting - April 13, 2017

Please find attached the action items from today's meeting.

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Sent: April-12-17 5:33 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken - FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); LEE John -TREASURY
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Thanks,

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1) GA Refinancing
    - LSB / Blakes / OPG to ask dealers about whether a rate class can be named as the backstop in legislation instead of individual ratepayers
    - LSB to circulate legislation for review and comment over the weekend
    - OPG Board to meet on May 1 for approval (Committee meetings to occur in advance)
    - TB / MBC to meet at 9am on May 1
    - OEB working to finalize RPP rates and release by April 20
    - OPG to develop note on why we can't revisit the financing structure (51/49)
    - KPMG, E&Y opinions to be provided by May 1
    - Constitutional Law opinion to be provided at a later date
    - 'Navigant Report' tracking for a later date; Ministry and OPG to work together to ensure alignment with internal OPG report for their Board
    - Ministry to work with OFA / TD to support report back to TB / MBC on overall structure and financibility

2) OPG Letter
    - Ministry to turn around comments on letter for end of day April 13

3) Other Items
    - RRRP / OESP / FN Rate
        - Ministry to meet with COO on April 26 re: FN Rate implementation
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Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Thursday, April 13, 2017 5:34:41 PM
Attachments:	Consolidated - OFHP Matrix - Week of April 10.docx Agenda_Weekly Rate Mitig Implmentation Group_Mar 13.docx Letter from Province to OPG.DOCX

From: Nelms, Scott (MOF)
Sent: Thursday, April 13, 2017 5:27 PM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Hi Dave,

Please see the following summary of today's OFHP discussion (Gadi note that there are a few references to OFA – that's what happens when you leave the room early):

GA Refinancing:

- Past week has involved several "all day, all hands" meetings to come to ground on legislative instructions
  - Included IESO, OPG, OEB, ENE, TB, MoF, Torys, Oslers, Blakes, Stikeman, Goldman, RBC, CIBC, TD
  - Now moving into drafting of legislation itself and anticipate several turns over the weekend
- This week's theme: who does what
  - OPG SPV: remains consistent, setting out and executing on a financing plan to purchase the regulatory asset from IESO
  - IESO: establishes the asset, sells it and acts as collection agent (not principle)
  - LDCs: also as collectors, but not at the table so have no voice, cannot impose incremental risk / burden on them, leverage existing structures
  - Ratepayers: final responsibility for repayment and there needs to be a direct link (normal course will be through IESO and LDCs but OPG SPV will need look through capabilities if necessary)
    - Cannot depend on intermediaries because that would result in degradation of credit ratings (would intermingle with ratings of intermediaries)
    - OEB has concerns around this tie to individual customers as it breaks from current practice
    - However it is required to meet credit requirements and in order to ensure IESO / LDCs do not take on incremental risk
- Provincial guarantees:
  - Focused on a springing guarantee (not a blanket guarantee) in the event of government action and/or unconstitutionality
  - Dealers will need them
  - Planning to park this for now as it is not viewed as a requirement ion legislation
  - Based on Gadi's feedback and the importance of this element, the team will attempt to clarify this point prior to introduction of legislation (consider whether anything is needed

in legislation)

- Rationale for AAA rating
  - Need to access broadest possible set of markets for these securities including securitization market which requires AAA
  - Also first of a kind transaction in Canada, and very large scale so need to aim for strongest possible rating
- Constitutional Law
  - Legislation is being drafted with the fairness concept at its core (tie to underlying generation assets in concept)
  - Making this defensible, but will need to tie back to cost curve of underlying contracts
    - Work is underway to develop this linkage
- Approvals
  - 9 am May 1 for TB approvals
  - External reports to be available at that meeting
    - E&Y: opinion 1-2 pages, plan to include in May 1 submission (based on facts and assumptions)
    - KPMG: opinion 4-5 pages approx., coordinate to also have for May 1 submission (based on facts and assumptions)
  - OPCD:
    - Would reference accounting opinions in the TB note
    - Still layers of detail on regulation and commercial agreements that will impact, therefore opinions likely to reference facts in legislation and assumptions around what will be in regulation / contracts
  - OFA / OPG / Dealers
    - Will be asked to prepare an assessment of financeability of the structure
- OPG
  - Accounting
    - Several calls + meetings set up for next week to begin to socialize and bring up to speed OPCD, E&Y, KPMG
    - Attempt is to be ready for accounting opinions to be delivered on a common set of facts
  - OPG Letter (earlier draft attached)
    - Comments from Province to be turned today
    - Provides choice to OPG Board to decide to participate based on commercial opportunity
  - OPG Actions:
    - Need a note describing why 49% / 51% split is necessary (need for accounting opinion on day 1 and throughout the program)
    - Need to better understand why OPG / Torys is seeking tax exempt status for the OPG SPV (and what that means)
- IESO
  - Ministry briefed Board earlier this week
  - Fair bit of work required on mechanics once legislation is in place
  - Will need to work with OFA on LoC, including enhancements to deal with adverse situations (if OPG does not purchase the asset)

        - Can affect credit ratings
    - Need to ensure we preserve IESO's ability and right to collect
- OEB
    - Minister's letter has been delivered to OEB in support of OEB rates
    - Comfort letter forming the basis of discussions of the RPP panel
    - April 20th announcement for May 1 rates

Affordability Fund

- Up and running
- First meeting of the advisors has occurred and they are getting ready to select Trustees

Social Programs

- Leveraging existing structures
- LDC working group next meets on Wednesday
    - Most focus on bill presentment (Province will propose minimal changes at implementation, more fundamental changes in fall, this will reduce anxiety)
- OESP
    - Reg to LRC on April 10th, approved, to be filed and posted
    - Working with MCSS for automatic enrollment (and with OEB);
        - Appear to have a path forward
        - Align with existing social assistance programs + OESP
- FN Rate
    - Meeting with Chiefs of Ontario set up on April 26th
    - Focused on implementation to move forward as quickly as possible to align with July 1 roll out
- RRRP
    - In discussions with OEB on mechanism
    - Continue to monitor rate filings including H Dx application filed last Friday and recently file InnPower application
        - Revise fiscal projections accordingly
    - Need a memo explaining why important to continue with OEB rate application process and not freeze all applications
        - OEB process allows for a fair and responsible mechanism to review rates (sometimes leads to decreases)
        - Need to maintain reliability
        - Increases may have an impact on fiscal plan
- Critical Path
    - Once legislation introduced May 1, quickly move to regulations
    - Late June LRC for July 1 implementation

ICI

- Working on promoting program, in partnership with industry partners
- Need for engagement as there is limited capacity in these organizations

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Sent: April 12, 2017 5:33 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair;

Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); LEE John -TREASURY
Cc: Imbrogno, Serge (ENERGY); Teliszewsky, Andrew (ENERGY); Whittington, Matt (ENERGY); Baker, Carys (ENERGY); MacIntyre, Kyle (TBS); McLean, David (MOF); Foster, Robert (CAB); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Bungaro-Yemec, Francesca (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Good evening,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

Implementation of Ontario's Fair Hydro Plan
Week of April 10, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		

• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation
	• Defining mitigation and recovery mechanism
	• Establishing roles for IESO, OPG and OEB
	• Regulation (amend O.Reg. 95/05)
	• Shareholder Resolution (work with OPG to determine form)
	• Accounting opinions from E&Y (OPG) and KPMG (IESO)
	• Financing:
	  o How long will IESO hold short term liability (weeks/months);
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	  o OPG to provide amount/frequency of equity required and indicate trigger
	• Third Party Technical Report (e.g., long lived assets, associated assessment of social, health and environmental benefits)
	
	<u>Recent Action Items</u>
	
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	• OPG to continue to work with lead banks / rating agencies / OFA on financing issues
	• OPG to confirm accounting if OFA were to act as lead order on borrowing
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		• Provide comfort letter to allow OEB to include in May 2017 RPP
		
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2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 23rd and March 24th • SNAP to continue to monitor rate hearings for RRRP LDCs • SNAP to collect billing implementation timeline estimates from LDCs • SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure in place to provide to existing consumers in Algoma and Remotes. May require separation of RRRP and broader distribution rate protection into separate programs. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC on May 1, 2017 (TBD) • Fall 2017 implementation (per Cabinet Minute)

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3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • LRC package for OESP enhancements (50% increase, expanded eligibility) approved by LRC and Cabinet. o Implementation on May 1 to align with OEB decision to end OESP charge on May 1, and to finance program through variance account. • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • SNAP to work with TBS map out how funds will flow from fiscal plan after legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to transition from OESP variance (approx. $100 million) to finance the program to financing with tax funds. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

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4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. • April 7, 2017: Briefing for Advisory Committee members <u>Considerations</u> • Legislative changes not required.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

Item	Key Deliverables / Considerations	Timing / Next Steps
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information. March 31, 2017, information provided to the FAO
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP <u>Recent Action Items</u> • Provide AG technical briefing presentation used in media lock-up on OFHP in advance of the technical briefing	• March 2017: Cabinet submissions provided to AG • April 19, 2017: Preliminary discussion on (TBD)
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment <u>Recent Action Items</u> • MO to clarify bill presentment expectations with PO (Bill inserts will be ready for July 1 with bill redesign to occur in the Fall)	• Initial discussion on March 31, 2017

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 13, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB / Blakes)
    - OPG Update
    - IESO Update
    - OEB Update

2) OPG Letter

3) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

4) Update on Action Items / Policy Matrix

Notes:

DRAFT: April 11, 2017

[Letterhead of Minister of Energy]

April [●], 2017

Bernard Lord
Board Chair
Ontario Power Generation Inc.
700 University Avenue, 19th Floor
Toronto, Ontario
M5G 1X6

Dear Mr. Lord:

I am writing further to the Premier's news release of March 2, 2017, in which the Province announced the Fair Hydro Plan to lower electricity bills by 25 per cent on average for certain customers starting in the summer of 2017, as part of a significant system restructuring that will address long-standing policy challenges and ensure greater fairness. Given OPG's expertise as a participant in the electricity market and its expertise in rate regulated accounting and investment stewardship over significant pension and nuclear funds, I am writing specifically to request OPG's involvement in the implementation of the Global Adjustment Refinancing component of the Fair Hydro Plan

As you will have read, the 25 percent reduction in residential electricity bills referred to in the March 2nd announcement includes the 8 per cent reduction resulting from the rebate of the provincial portion of the harmonized sales tax on electricity bills effective January 1, 2017. The Province has also committed that certain customer bills would not increase by more than the rate of inflation for the four years following the 25 per cent average reduction.

In addition, as you know, Ministry of Energy staff have been working on preparing the draft legislation and regulations to implement the Fair Hydro Plan, with input from the IESO, the OEB, OPG and their respective advisors.

The Province is requesting that OPG, working with the Ministry of Energy, the IESO, the OEB, and their respective advisors, consider and recommend a plan for financing mechanisms that could achieve the Province's objectives for the reduction in consumer bills and the limitation on bill increases outlined above and in the Fair Hydro Plan, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan.

In particular, the Province would like OPG's financing plan to consider, among other things, structures and methods that would permit viable refinancing of a portion of the Global

Adjustment to reduce electricity prices for certain of today's electricity ratepayers, with the costs of the refinancing to be recovered over a period of up to 30 years, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan. We would expect the financing plan to include:

i) potential structures for the financing, which may include, as appropriate, a special purpose vehicle created for the financing;

ii) potential financing mechanisms and instruments, including senior debt and subordinated debt; and

iii) identification of the capital markets and jurisdictions that can be accessed to finance the rate mitigation.

The Province recognizes the need to provide OPG with the necessary assurances with respect to recovery of the principal, interest, and operating and other costs of any financing and will address the specific requirements identified by OPG and its financial advisors, including in the pending legislation and regulations that will govern the mechanics and requirements of the financing entity. We would also request that your plan identify any amendments to OPG's governing legislation and constating documents needed to facilitate the implementation of the financing plan in a commercial manner.

We would further expect that the financing plan would be implemented in an effective and cost-efficient manner by OPG.

I look forward to receiving a detailed plan that has the support of the OPG Board of Directors by June 1, 2017.

Yours truly,

The Honourable Glenn Thibeault
Minister of Energy

From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	Fw: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Thursday, April 13, 2017 5:34:41 PM
Attachments:	Consolidated - OFHP Matrix - Week of April 10.docx Agenda_Weekly Rate Mitig Implmentation Group_Mar 13.docx Letter from Province to OPG.DOCX

From: Nelms, Scott (MOF)
Sent: Thursday, April 13, 2017 5:27 PM
To: David McLean (MOF)
Cc: Nancy Kennedy (MOHLTC); Gadi Mayman; Ronald Kwan
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Hi Dave,

Please see the following summary of today's OFHP discussion (Gadi note that there are a few references to OFA – that's what happens when you leave the room early):

GA Refinancing:

- Past week has involved several "all day, all hands" meetings to come to ground on legislative instructions
  - Included IESO, OPG, OEB, ENE, TB, MoF, Torys, Oslers, Blakes, Stikeman, Goldman, RBC, CIBC, TD
  - Now moving into drafting of legislation itself and anticipate several turns over the weekend
- This week's theme: who does what
  - OPG SPV: remains consistent, setting out and executing on a financing plan to purchase the regulatory asset from IESO
  - IESO: establishes the asset, sells it and acts as collection agent (not principle)
  - LDCs: also as collectors, but not at the table so have no voice, cannot impose incremental risk / burden on them, leverage existing structures
  - Ratepayers: final responsibility for repayment and there needs to be a direct link (normal course will be through IESO and LDCs but OPG SPV will need look through capabilities if necessary)
    - Cannot depend on intermediaries because that would result in degradation of credit ratings (would intermingle with ratings of intermediaries)
    - OEB has concerns around this tie to individual customers as it breaks from current practice
    - However it is required to meet credit requirements and in order to ensure IESO / LDCs do not take on incremental risk
- Provincial guarantees:
  - Focused on a springing guarantee (not a blanket guarantee) in the event of government action and/or unconstitutionality
  - Dealers will need them
  - Planning to park this for now as it is not viewed as a requirement ion legislation
  - Based on Gadi's feedback and the importance of this element, the team will attempt to clarify this point prior to introduction of legislation (consider whether anything is needed

in legislation)

- Rationale for AAA rating
  - Need to access broadest possible set of markets for these securities including securitization market which requires AAA
  - Also first of a kind transaction in Canada, and very large scale so need to aim for strongest possible rating
- Constitutional Law
  - Legislation is being drafted with the fairness concept at its core (tie to underlying generation assets in concept)
  - Making this defensible, but will need to tie back to cost curve of underlying contracts
    - Work is underway to develop this linkage
- Approvals
  - 9 am May 1 for TB approvals
  - External reports to be available at that meeting
    - E&Y: opinion 1-2 pages, plan to include in May 1 submission (based on facts and assumptions)
    - KPMG: opinion 4-5 pages approx., coordinate to also have for May 1 submission (based on facts and assumptions)
  - OPCD:
    - Would reference accounting opinions in the TB note
    - Still layers of detail on regulation and commercial agreements that will impact, therefore opinions likely to reference facts in legislation and assumptions around what will be in regulation / contracts
  - OFA / OPG / Dealers
    - Will be asked to prepare an assessment of financeability of the structure
- OPG
  - Accounting
    - Several calls + meetings set up for next week to begin to socialize and bring up to speed OPCD, E&Y, KPMG
    - Attempt is to be ready for accounting opinions to be delivered on a common set of facts
  - OPG Letter (earlier draft attached)
    - Comments from Province to be turned today
    - Provides choice to OPG Board to decide to participate based on commercial opportunity
  - OPG Actions:
    - Need a note describing why 49% / 51% split is necessary (need for accounting opinion on day 1 and throughout the program)
    - Need to better understand why OPG / Torys is seeking tax exempt status for the OPG SPV (and what that means)
- IESO
  - Ministry briefed Board earlier this week
  - Fair bit of work required on mechanics once legislation is in place
  - Will need to work with OFA on LoC, including enhancements to deal with adverse situations (if OPG does not purchase the asset)

        - Can affect credit ratings
    - Need to ensure we preserve IESO's ability and right to collect
- OEB
    - Minister's letter has been delivered to OEB in support of OEB rates
    - Comfort letter forming the basis of discussions of the RPP panel
    - April 20th announcement for May 1 rates

Affordability Fund

- Up and running
- First meeting of the advisors has occurred and they are getting ready to select Trustees

Social Programs

- Leveraging existing structures
- LDC working group next meets on Wednesday
    - Most focus on bill presentment (Province will propose minimal changes at implementation, more fundamental changes in fall, this will reduce anxiety)
- OESP
    - Reg to LRC on April 10th, approved, to be filed and posted
    - Working with MCSS for automatic enrollment (and with OEB);
        - Appear to have a path forward
        - Align with existing social assistance programs + OESP
- FN Rate
    - Meeting with Chiefs of Ontario set up on April 26th
    - Focused on implementation to move forward as quickly as possible to align with July 1 roll out
- RRRP
    - In discussions with OEB on mechanism
    - Continue to monitor rate filings including H Dx application filed last Friday and recently file InnPower application
        - Revise fiscal projections accordingly
    - Need a memo explaining why important to continue with OEB rate application process and not freeze all applications
        - OEB process allows for a fair and responsible mechanism to review rates (sometimes leads to decreases)
        - Need to maintain reliability
        - Increases may have an impact on fiscal plan
- Critical Path
    - Once legislation introduced May 1, quickly move to regulations
    - Late June LRC for July 1 implementation

ICI

- Working on promoting program, in partnership with industry partners
- Need for engagement as there is limited capacity in these organizations

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From: Katona, Keley (ENERGY)
Sent: April 12, 2017 5:33 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair;

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Item	Key Deliverables / Considerations	Timing / Next Steps
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB, MCSS and OEB	• Legislation • Regulation <u>Recent Action Items</u> • LRC package for OESP enhancements (50% increase, expanded eligibility) approved by LRC and Cabinet. o Implementation on May 1 to align with OEB decision to end OESP charge on May 1, and to finance program through variance account. • SNAP to continue to work through OESP automatic qualification with MCSS / OEB • SNAP to continue to work with, MOF, OEB and CRA on OESP wet signature • SNAP to work with TBS map out how funds will flow from fiscal plan after legislation passes <u>Considerations</u> • Ministry is working with OEB on how the OESP enhancement will be announced as part of a communications exercise. • Positive progress with OEB on implementation: o OEB has been engaged on implementation timelines for 50% + new eligibility – OEB working with LDCs to ensure systems are upgraded to reflect new credit amounts o Ongoing work with MCSS to auto-enroll those receiving / applying to social programs. Work plan for implementation being developed with OEB support. • As part of legislation / regulatory amendment work, investigating steps required to transition from OESP variance (approx. $100 million) to finance the program to financing with tax funds. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC on May 1, 2017 (TBD) • LRC on April 10, 2016 • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Recent Action Items</u> • SNAP convened LDC working group on March 24th • SNAP to move forward with including COO in FN rate implementation / work through implementation issues. SNAP working to meet with COO to have preliminary discussion of the FNDC • OEB has not posted FN rate report just yet as conversations are ongoing between Ministry on a letter from the Minister to the OEB acknowledging receipt of the report and outlining the plan for implementation <u>Considerations</u> • On-reserve eligibility considerations require discussion with Chiefs of Ontario • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13 million to $20 million • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, Blakes, CSD, OPCD, TBS, MOF and H1 (KPMG and Osler)	• TBC/MBC Submission • Declaration of Trust ("Trust Deed") • Transfer Payment Agreement (TPA) • Administrative Services Agreement (H1-Trust) <u>Recent Action Items</u> • March 23 and 24: Trust Deed and TPA executed. • March 30: Funds transferred to Computershare. • April 7, 2017: Briefing for Advisory Committee members <u>Considerations</u> • Legislative changes not required.	**April to May 2017:** • Advisory Committee recommends Board of Trustees by May 31, 2017; Computershare appoints full Board of Trustees **June 2017:** • Trustees expected to engage with distributors, IESO, OEB, others, to define funding criteria and processes. **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds **Late 2017/early 2018:** • ENERGY can apply for additional funds through 2018-19 PRRT based on performance and need. Trust term can be extended with amended/new TPA if agreed by Trust

Item	Key Deliverables / Considerations	Timing / Next Steps
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Recent Action Items</u> • ESP working to finalize materials for LRC on April 10, 2017 – draft language from leg. Counsel has been shared with ESP staff • Communications finalized TPA with OCC / ESP, CRED and COMMS to consider providing support to CME (outreach with CME ongoing) <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date as possible to impact electricity bills this year (May 31, 2017). • Ongoing outreach with LDCs being undertaken by IESO	• RR posting on the proposed amendment – posted March 9, 2017 for 30 days • LRC on April 10, 2016 • Report back to TB/MBC on May 1, 2017 • Effective April/May 2017 (TBD)
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • IESO's stakeholder engagement re Market Renewal is ongoing.	• Continue this work as part of LTEP

Item	Key Deliverables / Considerations	Timing / Next Steps
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Recent Action Items</u> • ESP to work with other ministries regarding other measures that can be considered for SMEs <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in fall 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March

Item	Key Deliverables / Considerations	Timing / Next Steps
11) Engagement with Officers of the Legislature		
• ENERGY, MOF/OFA, Financial Accountability Officer (FAO)	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion • March 14, 2017: Letter received requesting additional information. March 31, 2017, information provided to the FAO
• ENERGY, MOF/OFA, Auditor General (AG)	• Provide the AG with a technical briefing on the OFHP <u>Recent Action Items</u> • Provide AG technical briefing presentation used in media lock-up on OFHP in advance of the technical briefing	• March 2017: Cabinet submissions provided to AG • April 19, 2017: Preliminary discussion on (TBD)
12) Bill Presentment (SNAP/LSB)		
• ENERGY	• Ministry to begin work on bill presentment <u>Recent Action Items</u> • MO to clarify bill presentment expectations with PO (Bill inserts will be ready for July 1 with bill redesign to occur in the Fall)	• Initial discussion on March 31, 2017

WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
April 13, 2017

Agenda

1) GA Refinancing
    - Legislative Drafting (LSB / Blakes)
    - OPG Update
    - IESO Update
    - OEB Update

2) OPG Letter

3) Other OFHP Initiatives
    - Affordability Fund (CRED)
    - RRRP, OESP and FN (SNAP)
    - ICI (ESPD)

4) Update on Action Items / Policy Matrix

Notes:

DRAFT: April 11, 2017

[Letterhead of Minister of Energy]

April [●], 2017

Bernard Lord
Board Chair
Ontario Power Generation Inc.
700 University Avenue, 19th Floor
Toronto, Ontario
M5G 1X6

Dear Mr. Lord:

I am writing further to the Premier's news release of March 2, 2017, in which the Province announced the Fair Hydro Plan to lower electricity bills by 25 per cent on average for certain customers starting in the summer of 2017, as part of a significant system restructuring that will address long-standing policy challenges and ensure greater fairness. Given OPG's expertise as a participant in the electricity market and its expertise in rate regulated accounting and investment stewardship over significant pension and nuclear funds, I am writing specifically to request OPG's involvement in the implementation of the Global Adjustment Refinancing component of the Fair Hydro Plan

As you will have read, the 25 percent reduction in residential electricity bills referred to in the March 2nd announcement includes the 8 per cent reduction resulting from the rebate of the provincial portion of the harmonized sales tax on electricity bills effective January 1, 2017. The Province has also committed that certain customer bills would not increase by more than the rate of inflation for the four years following the 25 per cent average reduction.

In addition, as you know, Ministry of Energy staff have been working on preparing the draft legislation and regulations to implement the Fair Hydro Plan, with input from the IESO, the OEB, OPG and their respective advisors.

The Province is requesting that OPG, working with the Ministry of Energy, the IESO, the OEB, and their respective advisors, consider and recommend a plan for financing mechanisms that could achieve the Province's objectives for the reduction in consumer bills and the limitation on bill increases outlined above and in the Fair Hydro Plan, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan.

In particular, the Province would like OPG's financing plan to consider, among other things, structures and methods that would permit viable refinancing of a portion of the Global

Adjustment to reduce electricity prices for certain of today's electricity ratepayers, with the costs of the refinancing to be recovered over a period of up to 30 years, all in accordance with the legislation and regulations designed to facilitate the Fair Hydro Plan. We would expect the financing plan to include:

i) potential structures for the financing, which may include, as appropriate, a special purpose vehicle created for the financing;

ii) potential financing mechanisms and instruments, including senior debt and subordinated debt; and

iii) identification of the capital markets and jurisdictions that can be accessed to finance the rate mitigation.

The Province recognizes the need to provide OPG with the necessary assurances with respect to recovery of the principal, interest, and operating and other costs of any financing and will address the specific requirements identified by OPG and its financial advisors, including in the pending legislation and regulations that will govern the mechanics and requirements of the financing entity. We would also request that your plan identify any amendments to OPG's governing legislation and constating documents needed to facilitate the implementation of the financing plan in a commercial manner.

We would further expect that the financing plan would be implemented in an effective and cost-efficient manner by OPG.

I look forward to receiving a detailed plan that has the support of the OPG Board of Directors by June 1, 2017.

Yours truly,

The Honourable Glenn Thibeault
Minister of Energy

From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Gavin He; Anna Strathy
Subject: Fw: Rate Mitigation Implementation Meeting - April 20, 2017
Date: Thursday, April 20, 2017 3:39:49 PM
Attachments: Action Items April 20.docx

From: Katona, Keley (ENERGY)
Sent: Thursday, April 20, 2017 3:08 PM
To: Steen Hume (CAB); Kaili Sermat-Harding (ENERGY); Michael Reid (ENERGY); Carolyn Calwell (MCSS); Scott Nelms (ENERGY); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Scott Thompson (CAB); Helen Angus (MOHLTC); Steven Davidson (MTCS); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Gadi Mayman; LEE John -TREASURY
Cc: Serge Imbrogno (ENERGY); Andrew Teliszewsky (ENERGY); Matt Whittington (ENERGY); Baker, Carys (ENERGY); Kyle MacIntyre (MOF); David McLean (MOF); Robert Foster (MOF); jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca'; Turnevicius, Lorraine; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY)
Subject: RE: Rate Mitigation Implementation Meeting - April 20, 2017

Attached are the action items from today's meeting.

From: Katona, Keley (ENERGY)
Sent: April-19-17 5:11 PM
To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); ''jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com)'; 'HARTWICK Ken -FINANCE (ken.hartwick@opg.com)'; 'Rosemaire Leclair'; 'Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca)'; 'Campbell, Bruce (bruce.campbell@ieso.ca)'; 'Kim Marshall (Kim.Marshall@ieso.ca)'; Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); 'LEE John -TREASURY'
Cc: Imbrogno, Serge (ENERGY); Teliszewsky, Andrew (ENERGY); Whittington, Matt (ENERGY); Baker, Carys (ENERGY); MacIntyre, Kyle (TBS); McLean, David (MOF); Foster, Robert (CAB); 'jordan.penic@ieso.ca'; 'sarah.branco@ontarioenergyboard.ca'; 'Turnevicius, Lorraine'; 'catriona.king@opg.com'; Bungaro-Yemec, Francesca (ENERGY)
Subject: Rate Mitigation Implementation Meeting - April 20, 2017

Good afternoon,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

Action Items – April 20, 2017

GA Refinancing

- LSB / Blakes to turn around revised document today with comments due by end of day Sunday
- IESO / OPG to work together on outstanding issue regarding OPG cash flows
- OPG to draft terms of guarantee to dealers which will be presented to dealers
- MOF (IGS) to work through equity injection mechanics and will report back next week
- IESO to work with KPMG on IESO recovery mechanism
- Pens down on refinancing legislation April 28

Other OFHP Initiatives

- Pens down on social program legislation April 28
- ENERGY working with MCSS on automatic enrolment
- ENERGY meeting with COO next week on FN rate
- ENERGY / MOF / OEB / ICF discussions with CRA ongoing on wet signature
- Affordability Fund advisory committee met this week and reached consensus on three LDCs + two social agencies to be represented on Trust Board (Ottawa Carlton UW / Advocacy Centre for Tenants Ontario / Thunder Bay Hydro / Hydro One / Alectra)
- ENERGY continues to work with OCC / CME on targeted outreach regarding energy programs for business, including ICI

Other Items

- ENERGY drafting TB / LRC submissions as well as presentation to Cabinet – May 9, 10

From:	Nelms, Scott (MOF)
To:	Gadi Mayman; Ronald Kwan; Mike Manning
Subject:	Fw: Rate Mitigation Implementation
Date:	Friday, March 10, 2017 8:34:56 AM
Attachments:	Summary of Work Plan.docx OFHP Gov and Delievery Structure - March 9.docx Agenda_Weekly Rate Mitig Implmentation Group_March 9cc.docx 2017-03-08 Consolidated - OFHP Matrix - March 9_v2 ksh.docx Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf

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Good Morning,

Please see the following update and attached materials relating to Energy's kick off Fair Hydro Plan implementation discussion.

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca>
Sent: Thursday, March 9, 2017 5:23 PM
To: McLean, David (MOF)
Cc: Kennedy, Nancy (MOF); Young, Gwendolynne (MOF)
Subject: RE: Rate Mitigation Implementation

Hi David,

I thought I would share a high level summary of this morning’s discussion.

The meeting started with a conversation around structures and how Energy plans to move all of the elements of the Fair Hydro Plan forward. In essence, these Thursday meetings will become a regular occurrence (next week is scheduled for Wednesday). This will act as a feeder for issue specific working groups in order to have a single window for reporting in on progress and issues that require resolution. See attached “OFHP Gov and Delivery Structure” for details. There will also be regular DM level updates to keep respective Ministries apprised of progress.

GA Smoothing (Blakes Update)

Blakes, who has been engaged by the Ministry of Energy, provided an overview of the Long Island Power Authority securitization structure that has been referenced several times as a model (albeit smaller) for the GA Smoothing mechanism. Here are some high level details:

o Nuclear facility mothballed and facility costs needed to be repaid over time
o In part as a result of this large liability, LIPA's credit rating was weak increasing borrowing costs
o Created framework in legislation, allowed for a financing order every time the separate entity went out for financing (abbreviated hearing to review merits of case)
o Role of Financial Regulator (closer to OSC than OEB):
· Public Authority Control Board
· Abbreviated hearing
· Form over substance, to ensure calculations are correct
· Regulator needed to be sure that issuance designed to receive lower cost borrowing + meet objectives of the legislation
· If stakeholders want to challenge the validity of order, had 30 days to do so and then foreclosed, after 30 days bonds could be issued
o Asset:
· Order and charges irrevocable: right that could not be changed

· True-up mechanism: ability to adjust collections from end users to ensure cover principle and interest
· Ensure consumers cannot bypass system (pay as long as connected to the grid, whether consuming or not)
· Charge not more than 10% of bill
· Set up as a "true sale" - rights around asset protected
o Unique features (would not apply in Canada):
· State pledge: state would not introduce legislation or do anything to affect rights of assets or bondholders
§ Creates a constitutional right, if reversed is a "taking of the government" which results in a particular process
· Bankruptcy: bondholders can make an application to court to direct payment to bondholders
· While these elements cannot be replicated in the same way in Canada, Blakes suggests it will be important to enable similar protections under the Canadian legal framework to the extent possible

Blakes also walked through key elements that the market and rating agencies will seek in order to ensure this is financeable (according to Blakes there will be an expectation that mitigation measures will be in place for each):
· Size and breadth of customer base
· Non-bypassability
· Volatility of policy environment
· For more details, Blakes suggests reading the attached Moody's guide

GA Smoothing (OPG Update)

OPG walked through the attached summary workplan providing an update on key buckets of work including that included a number of touch points with the OFA and MoF focused on process for borrowing and equity infusion both at inception and ongoing approvals. Note that OPG is conceiving of each incremental debt issuance as an amendment to the borrowing agreement rather than as individual tranches in order to avoid differentiation between bondholder priority thereby minimizing long term interest costs. Note that working groups are beginning to meet to think in more detail to think through these issues.

GA Smoothing (IESO Update)

· IESO is thinking through what needs to be in legislation, regulation, market rules and in an agreement with OPG.

· IESO is also working with OPCD and KPMG to finalize its revised financials to incorporate its market books. IESO will file its audited financial statement with the AG in May. Further thought is needed on timing and level of engagement with the AG's office.

· On a related note, the AG has reached out through OPCD for an initial briefing on the Fair Hydro Plan.

GA Smoothing (Legislative Drafting Update)

· Energy legal expects to have first drafts to share shortly for input

· Targeting mid-April for approvals

GA Smoothing (General)

· OEB was also included in the discussion and continues to have concerns about its role in the process. Further consideration is required in the context of accounting and financing imperatives

Other Updates

· Work on the RRRP, OESP and First Nations rate is progressing in parallel. There was some talk of inclusion

of these elements in the Budget Bill, but no certainty on whether that would be possible from a timing perspective.

· The Affordability Fund is moving on a more expedited path. A first draft of the TPA has been shared with Hydro One for review. Hydro One is working to establish the Trust.

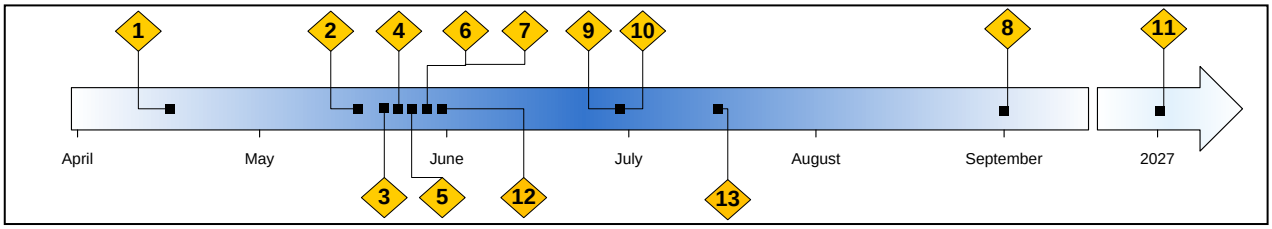
Thanks,
Scott

Summary of Work Plan

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.



[Note deleted #13]

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.
  1. These amendments would be similar in nature to previous amendments made to Hydro One's governing provisions in the Electricity Act.
  2. The amendments would, for example, allow OPG to create and operate through subsidiaries, and also enable OPG to raise financing through public offering of debt. (OPG may need to raise some financing to fund a portion of the subordinated debt going into the trust.)
- The electricity legislation will be amended to implement the deferral and financing of the GA, including amendments:
  1. to reflect that the IESO may defer collection of a portion of the GA;
  2. to create a "regulatory asset" consisting of the right to recover, over time, the amount GA being deferred, together with interest and other financing costs;
  3. to allow the IESO to sell that regulatory asset to a third party (the trust/financing vehicle);
  4. 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
  5. that also provides the OEB with no rights (or very limited rights) to review the terms on which the GA deferral is recovered (i.e. the interest rate, other financing costs and the amortization period). (This is needed to make the GA deferral financeable in the capital markets.)

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).

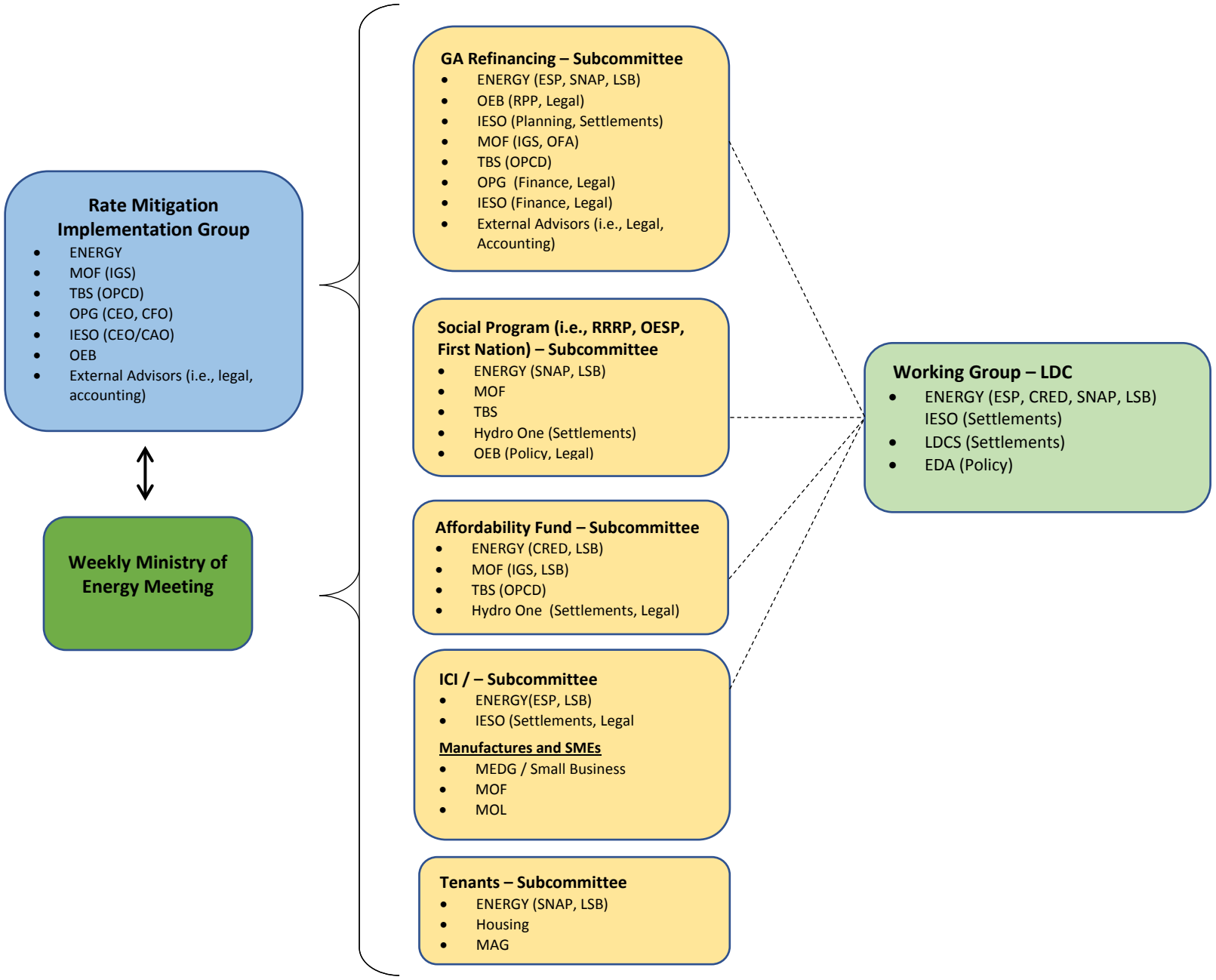
11. **Recovering Principal from IESO [Stakeholders: OPG, IESO]**

    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 A – Terms Necessary for OPG to Consolidate the Global Adjustment Trust.

Governance and Delivery Structure for Implementation of Ontario's Fair Hydro Plan



WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
March 9, 2017

Agenda

1) Governance / Delivery Structure – Overview (ESPD)

2) GA Refinancing
    - Overview of US models (Blakes)
    - OPG Update
    - IESO Update
    - Legislative Drafting (LSB)

3) Affordability Fund (CRED)

4) RRRP, OESP and FN (SNAP)

5) ICI (ESPD)

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of March 6, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		

• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation:
	  o Defining mitigation and recovery mechanism; and
	  o Establishing roles for IESO, OPG and OEB
	• Regulation (amend O.Reg.429/04)
	• Shareholder Declaration and Resolution
	• Third Party Technical Report re Long Lived Assets (TBD)
	• Accounting opinions from E&Y (OPG) and KPMG (IESO)
	• Financing:
	  o IESO line of credit to bridge from May-July;
	  o OEFC to OPG equity injection structure; and
	  o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc)
	
	<u>Considerations</u>
	• GA refinancing legislation could also include legislative changes to enable broadening of RRRP, expanding of OESP and establishing of FN delivery credit.
	• Ongoing legal, accounting and financing risk assessments.
	• Impact on Electricity Sector Dedicated Income.
	• OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers.
		• Report back to TBC/MBC by spring 2017, prior to going to LRC with any legislation, on the approach to refinance GA (per TBC/MBC Minute)
		
		• Report to TBC/MBC, LRC and Cabinet in spring 2017 (per Cabinet Minute)
		
		• Provide comfort level to allow OEB to include in May 2017 RPP
		
		• Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure	• Report back to TB/MBC by Spring 2017 • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
	in place to provide to existing consumers in Algoma and Remotes. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB and OEB	• Legislation • Regulation (TBD) <u>Considerations</u> • Reach out to OEB to consider whether surplus funding of ~$100M could be used to increase OESP credits by 50%. Regulation can be updated quickly (need to consider whether posting on EBR is required). • Consider whether revised directive needed to continue having OEB administer program. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC by Spring 2017 • Program in place in 2017 (per Cabinet Minute)
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Considerations</u> • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13M to $20M • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, TBS, MOF and H1	• TBC/MBC Submission • Trust Structure • Transfer Payment Agreement (multi-party) <u>Considerations</u> • Legislative changes not required. • Funding needs to flow to the Trust prior to March 31, 2017.	**Week of March 6, 2017:** • TBC/MBC approval (March 6th) • CAB approval (March 8th) • Follow up calls with several LDCs and EDA to provide updates and outline proposed principles for the Fund (Ongoing engagement with Hydro One, LSB, OPCD, CSD on principles and establishment of Trust and development of Transfer Payment Agreement (TPA) (including sharing of drafts for comment); **Week of March 13, 2017:** • Hydro One to finalize establishment of Trust by March 17th • Continue development of TPA, including circulating near to final version by March 17th **Week of March 20, 2017:** • Execute TPA between the Ministry and the Trust by March 22nd • Initiate process to flow funds to the Trust; to be completed before March 31st

Item	Key Deliverables / Considerations	Timing / Next Steps
		April to May 2017: • Additional trustees to be appointment; Trust develops further details, e.g. customer eligibility criteria and processes for LDCs to apply for funds; to be developed in consultation with LDCs **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date to impact electricity bills this year (May 15, 2017). • RR posting is typically a minimum of 45-days for all regulatory changes affecting business to allow for review/comment. **Note:** RR posting is not a legal requirement but a best practice. • Working with the Ontario Chamber of Commerce on a targeted outreach campaign.	• RR posting on the proposed amendment • Report back to TBC/MBC by spring 2017 (per TBC/MBC Minute) • LRC [DATE] • Effective May 2017 (TBD)

Item	Key Deliverables / Considerations	Timing / Next Steps
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • Opportunity to highlight Market Renewal in the next LTEP. • IESO's stakeholder engagements on Market Renewal is ongoing. • Moving away from a two schedule system could impact consumer prices depending on implementation. • Most of the savings accrue from the move to a capacity auction. These savings do not materialize until the province has capacity requirements.	• Continue this work as part of LTEP
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in spring 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March
11) FAO Engagement		
• ENERGY, MOF/OFA, FAO	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion.

MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

The credit ratings assigned in this sector are primarily determined by this credit rating methodology. Certain broad methodological considerations (described in one or more secondary or cross-sector credit rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments in this sector. Potentially related secondary and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Please refer to Moody's Rating Symbols and Definitions, which is available here, for further information.

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From:	Nelms, Scott (MOF)
To:	Gadi Mayman; Ronald Kwan; Mike Manning
Subject:	Fw: Rate Mitigation Implementation
Date:	Friday, March 10, 2017 8:34:56 AM
Attachments:	Summary of Work Plan.docx OFHP Gov and Delievery Structure - March 9.docx Agenda_Weekly Rate Mitig Implmentation Group_March 9cc.docx 2017-03-08 Consolidated - OFHP Matrix - March 9_v2 ksh.docx Moody"s - Securities Backed by Utility Cost Recovery Charges Jun 2015.pdf

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Good Morning,

Please see the following update and attached materials relating to Energy's kick off Fair Hydro Plan implementation discussion.

Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca>
Sent: Thursday, March 9, 2017 5:23 PM
To: McLean, David (MOF)
Cc: Kennedy, Nancy (MOF); Young, Gwendolynne (MOF)
Subject: RE: Rate Mitigation Implementation

Hi David,

I thought I would share a high level summary of this morning’s discussion.

The meeting started with a conversation around structures and how Energy plans to move all of the elements of the Fair Hydro Plan forward. In essence, these Thursday meetings will become a regular occurrence (next week is scheduled for Wednesday). This will act as a feeder for issue specific working groups in order to have a single window for reporting in on progress and issues that require resolution. See attached “OFHP Gov and Delivery Structure” for details. There will also be regular DM level updates to keep respective Ministries apprised of progress.

GA Smoothing (Blakes Update)

Blakes, who has been engaged by the Ministry of Energy, provided an overview of the Long Island Power Authority securitization structure that has been referenced several times as a model (albeit smaller) for the GA Smoothing mechanism. Here are some high level details:

o Nuclear facility mothballed and facility costs needed to be repaid over time
o In part as a result of this large liability, LIPA's credit rating was weak increasing borrowing costs
o Created framework in legislation, allowed for a financing order every time the separate entity went out for financing (abbreviated hearing to review merits of case)
o Role of Financial Regulator (closer to OSC than OEB):
· Public Authority Control Board
· Abbreviated hearing
· Form over substance, to ensure calculations are correct
· Regulator needed to be sure that issuance designed to receive lower cost borrowing + meet objectives of the legislation
· If stakeholders want to challenge the validity of order, had 30 days to do so and then foreclosed, after 30 days bonds could be issued
o Asset:
· Order and charges irrevocable: right that could not be changed

· True-up mechanism: ability to adjust collections from end users to ensure cover principle and interest
· Ensure consumers cannot bypass system (pay as long as connected to the grid, whether consuming or not)
· Charge not more than 10% of bill
· Set up as a "true sale" - rights around asset protected
o Unique features (would not apply in Canada):
· State pledge: state would not introduce legislation or do anything to affect rights of assets or bondholders
§ Creates a constitutional right, if reversed is a "taking of the government" which results in a particular process
· Bankruptcy: bondholders can make an application to court to direct payment to bondholders
· While these elements cannot be replicated in the same way in Canada, Blakes suggests it will be important to enable similar protections under the Canadian legal framework to the extent possible

Blakes also walked through key elements that the market and rating agencies will seek in order to ensure this is financeable (according to Blakes there will be an expectation that mitigation measures will be in place for each):
· Size and breadth of customer base
· Non-bypassability
· Volatility of policy environment
· For more details, Blakes suggests reading the attached Moody's guide

GA Smoothing (OPG Update)

OPG walked through the attached summary workplan providing an update on key buckets of work including that included a number of touch points with the OFA and MoF focused on process for borrowing and equity infusion both at inception and ongoing approvals. Note that OPG is conceiving of each incremental debt issuance as an amendment to the borrowing agreement rather than as individual tranches in order to avoid differentiation between bondholder priority thereby minimizing long term interest costs. Note that working groups are beginning to meet to think in more detail to think through these issues.

GA Smoothing (IESO Update)

· IESO is thinking through what needs to be in legislation, regulation, market rules and in an agreement with OPG.

· IESO is also working with OPCD and KPMG to finalize its revised financials to incorporate its market books. IESO will file its audited financial statement with the AG in May. Further thought is needed on timing and level of engagement with the AG's office.

· On a related note, the AG has reached out through OPCD for an initial briefing on the Fair Hydro Plan.

GA Smoothing (Legislative Drafting Update)

· Energy legal expects to have first drafts to share shortly for input

· Targeting mid-April for approvals

GA Smoothing (General)

· OEB was also included in the discussion and continues to have concerns about its role in the process. Further consideration is required in the context of accounting and financing imperatives

Other Updates

· Work on the RRRP, OESP and First Nations rate is progressing in parallel. There was some talk of inclusion

of these elements in the Budget Bill, but no certainty on whether that would be possible from a timing perspective.

· The Affordability Fund is moving on a more expedited path. A first draft of the TPA has been shared with Hydro One for review. Hydro One is working to establish the Trust.

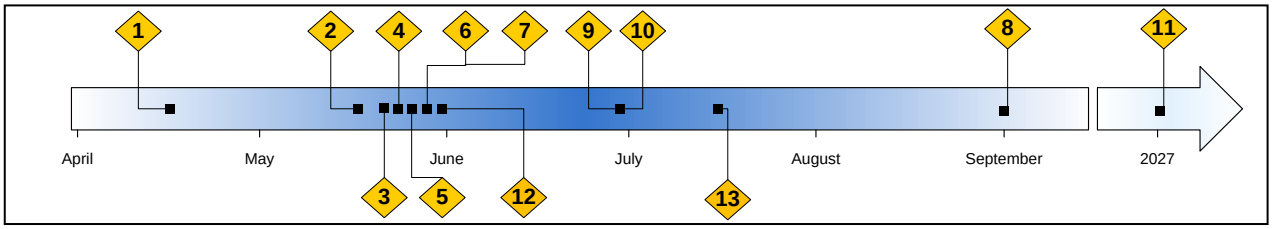
Thanks,
Scott

Summary of Work Plan

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.



[Note deleted #13]

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.
  1. These amendments would be similar in nature to previous amendments made to Hydro One's governing provisions in the Electricity Act.
  2. The amendments would, for example, allow OPG to create and operate through subsidiaries, and also enable OPG to raise financing through public offering of debt. (OPG may need to raise some financing to fund a portion of the subordinated debt going into the trust.)
- The electricity legislation will be amended to implement the deferral and financing of the GA, including amendments:
  1. to reflect that the IESO may defer collection of a portion of the GA;
  2. to create a "regulatory asset" consisting of the right to recover, over time, the amount GA being deferred, together with interest and other financing costs;
  3. to allow the IESO to sell that regulatory asset to a third party (the trust/financing vehicle);
  4. 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
  5. that also provides the OEB with no rights (or very limited rights) to review the terms on which the GA deferral is recovered (i.e. the interest rate, other financing costs and the amortization period). (This is needed to make the GA deferral financeable in the capital markets.)

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).

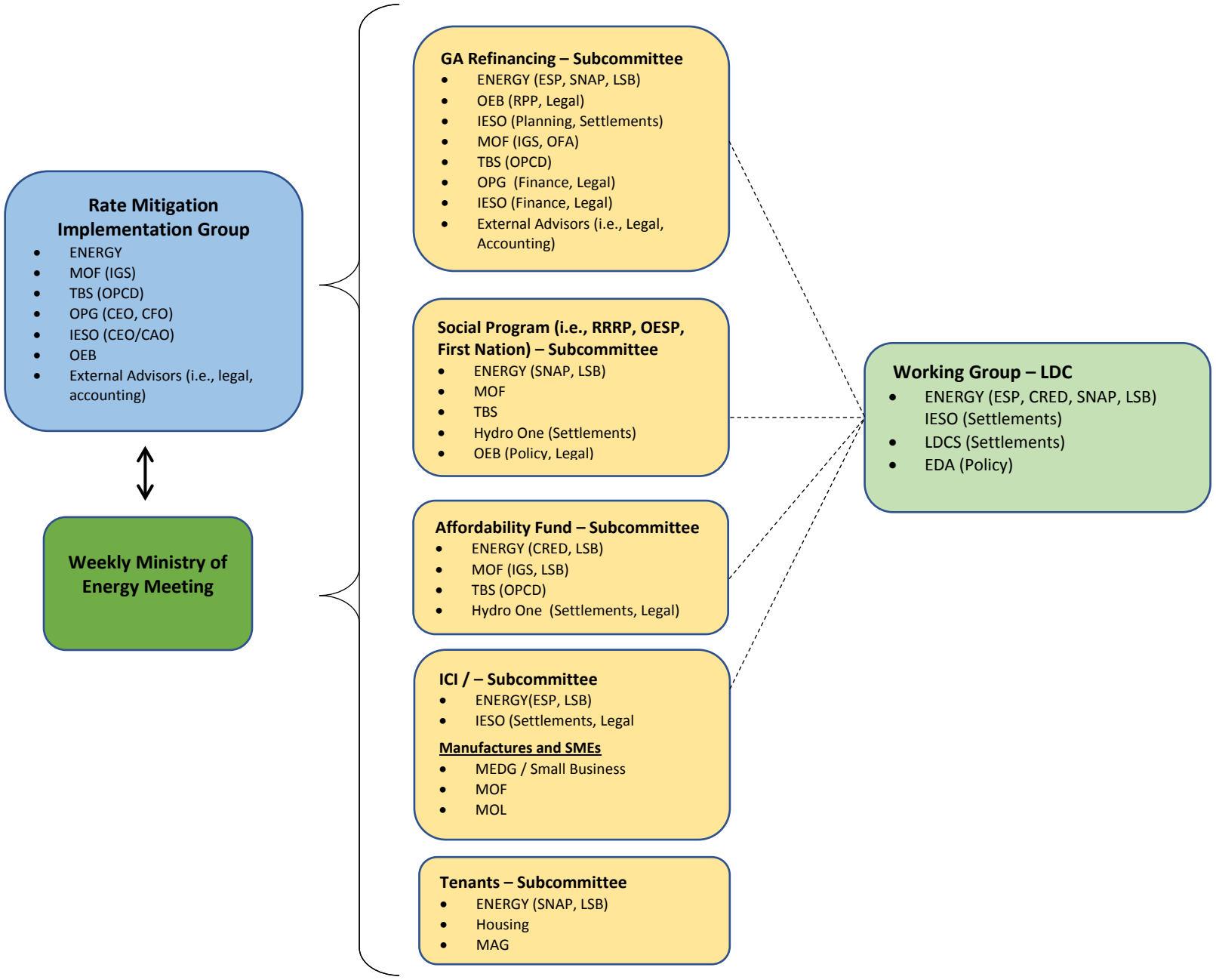
11. **Recovering Principal from IESO [Stakeholders: OPG, IESO]**

    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 A – Terms Necessary for OPG to Consolidate the Global Adjustment Trust.

Governance and Delivery Structure for Implementation of Ontario's Fair Hydro Plan



WEEKLY RATE MITIGATION IMPLEMENTATION GROUP
March 9, 2017

Agenda

1) Governance / Delivery Structure – Overview (ESPD)

2) GA Refinancing
    - Overview of US models (Blakes)
    - OPG Update
    - IESO Update
    - Legislative Drafting (LSB)

3) Affordability Fund (CRED)

4) RRRP, OESP and FN (SNAP)

5) ICI (ESPD)

Notes:

Implementation of Ontario's Fair Hydro Plan
Week of March 6, 2017

Item	Key Deliverables / Considerations	Timing / Next Steps
1) Refinancing the Global Adjustment (ESP/IGS)		

• ENERGY, LSB, IESO, OPG, OEB, TBS and MOF	• Legislation:
	  o Defining mitigation and recovery mechanism; and
	  o Establishing roles for IESO, OPG and OEB
	• Regulation (amend O.Reg.429/04)
	• Shareholder Declaration and Resolution
	• Third Party Technical Report re Long Lived Assets (TBD)
	• Accounting opinions from E&Y (OPG) and KPMG (IESO)
	• Financing:
	  o IESO line of credit to bridge from May-July;
	  o OEFC to OPG equity injection structure; and
	  o OPG trust rating agency review and 3rd party lender market sounding (e.g., cost/term, etc)
	
	<u>Considerations</u>
	• GA refinancing legislation could also include legislative changes to enable broadening of RRRP, expanding of OESP and establishing of FN delivery credit.
	• Ongoing legal, accounting and financing risk assessments.
	• Impact on Electricity Sector Dedicated Income.
	• OEB-RPP Filing in May 2017. OEB may also be required to set new GA rate for RPP-eligible consumers.
		• Report back to TBC/MBC by spring 2017, prior to going to LRC with any legislation, on the approach to refinance GA (per TBC/MBC Minute)
		
		• Report to TBC/MBC, LRC and Cabinet in spring 2017 (per Cabinet Minute)
		
		• Provide comfort level to allow OEB to include in May 2017 RPP
		
		• Summer 2017 implementation (June/July). OPG preference for July 1 to align with quarter-end

2) Broadening Rural or Remote Rate Protection (RRRP) (SNAP)		
• ENERGY, LSB and LDCs	• Legislation • Regulation (TBD) <u>Considerations</u> • Consideration of revising definitions of RRRP program for broadening to other LDCs and continue to have current structure	• Report back to TB/MBC by Spring 2017 • Fall 2017 implementation (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
	in place to provide to existing consumers in Algoma and Remotes. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	
3) Expanding Ontario Electricity Support Program (OESP) (SNAP)		
• ENERGY, LSB and OEB	• Legislation • Regulation (TBD) <u>Considerations</u> • Reach out to OEB to consider whether surplus funding of ~$100M could be used to increase OESP credits by 50%. Regulation can be updated quickly (need to consider whether posting on EBR is required). • Consider whether revised directive needed to continue having OEB administer program. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF.	• Report back to TB/MBC by Spring 2017 • Program in place in 2017 (per Cabinet Minute)
4) Providing a First Nations On-Reserve Delivery Credit (SNAP)		
• ENERGY and LSB	• Legislation • Regulation (TBD) <u>Considerations</u> • Work with LDCs on implementation details that need to be captured in legislation. • Legislation required to have program funded by taxpayers. • Technical/governance structures needed to flow taxpayer money to programs. Need to work with IESO/OEB/MOF. • Work with LDCs to consider any bill messaging.	• Report back to TB/MBC by Spring 2017 with final program details, including performance management framework, and clarifying how the programs aligns with the significant OEB estimate of program costs, from $13M to $20M • Program in place in 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
5) Establishing an Affordability Fund (CRED)		
• ENERGY, IGS, LSB, TBS, MOF and H1	• TBC/MBC Submission • Trust Structure • Transfer Payment Agreement (multi-party) <u>Considerations</u> • Legislative changes not required. • Funding needs to flow to the Trust prior to March 31, 2017.	**Week of March 6, 2017:** • TBC/MBC approval (March 6th) • CAB approval (March 8th) • Follow up calls with several LDCs and EDA to provide updates and outline proposed principles for the Fund (Ongoing engagement with Hydro One, LSB, OPCD, CSD on principles and establishment of Trust and development of Transfer Payment Agreement (TPA) (including sharing of drafts for comment); **Week of March 13, 2017:** • Hydro One to finalize establishment of Trust by March 17th • Continue development of TPA, including circulating near to final version by March 17th **Week of March 20, 2017:** • Execute TPA between the Ministry and the Trust by March 22nd • Initiate process to flow funds to the Trust; to be completed before March 31st

Item	Key Deliverables / Considerations	Timing / Next Steps
		April to May 2017: • Additional trustees to be appointment; Trust develops further details, e.g. customer eligibility criteria and processes for LDCs to apply for funds; to be developed in consultation with LDCs **June 2017:** • Report back to TB/MBC with final program details and a performance management framework including outcome measures and targets **Summer 2017:** • LDCs begin to apply to the Trust for funds
6) Expanding ICI (ESP)		
• ENERGY, LSB, IESO and LDCs	• Regulation (amend O.Reg.429/04) • Regulatory Registry (RR) posting <u>Considerations</u> • Amendments need to be in effect as much in advance of the consumer notification date to impact electricity bills this year (May 15, 2017). • RR posting is typically a minimum of 45-days for all regulatory changes affecting business to allow for review/comment. **Note:** RR posting is not a legal requirement but a best practice. • Working with the Ontario Chamber of Commerce on a targeted outreach campaign.	• RR posting on the proposed amendment • Report back to TBC/MBC by spring 2017 (per TBC/MBC Minute) • LRC [DATE] • Effective May 2017 (TBD)

Item	Key Deliverables / Considerations	Timing / Next Steps
7) Energy Sector Efficiencies (i.e., Ontario Energy Board and IESO) (SNAP / ESP)		
• ENERGY, LSB, OEB and IESO	**OEB:** • Directive / Letter (TBD) <u>Considerations</u> • Signal efficiencies intent in OEB business plan letter • Work with OEB/LDCs on LTEP document and proposed directive to OEB **IESO:** • Directive / Letter (TBD) <u>Considerations</u> • Opportunity to highlight Market Renewal in the next LTEP. • IESO's stakeholder engagements on Market Renewal is ongoing. • Moving away from a two schedule system could impact consumer prices depending on implementation. • Most of the savings accrue from the move to a capacity auction. These savings do not materialize until the province has capacity requirements.	• Continue this work as part of LTEP
8) Additional Initiatives for Small Business and Industrials (i.e., Class B) (ESP)		
• ENERGY, MEDG, MOF, MOECC, MOL and Small Business	• Identify additional opportunities to assist Class B electricity consumers and small and medium sized manufacturers' <u>Considerations</u> • TBD	• Report back to TBC/MBC and Cabinet in spring 2017 (per Cabinet Minute)

Item	Key Deliverables / Considerations	Timing / Next Steps
9) Initiatives for Tenants (SNAP)		
• ENERGY and MOH	• Explore ways to provide direct assistance to tenants that are not sub-metered and do not directly benefit under the existing and proposed rate mitigation programs <u>Considerations</u> • MHO leading any legislative/regulatory changes needed to have tenants benefit from program. Consider whether benefits are limited to 8% and GA (rather than OESP which is harder to provide to tenants who do not pay their bills). • ENERGY working with MCSS to streamline/automate enrollment for ODSP/OW consumers into OESP.	• Report back to TBC/MBC and Cabinet in spring 2017 (Per Cabinet Minute)
10) Stakeholder/Agency Outreach (Communications)		
• ENERGY	• Minister's letters to: o Ratepayers; o LDCs; o Business (e.g., OCC, CME, Concerned Manufactures, etc); and o Agencies (i.e., IESO, OPG, OEB and H1)	• Early-mid March
11) FAO Engagement		
• ENERGY, MOF/OFA, FAO	• Provide FAO staff with a technical briefing on the OFHP	• March 9, 2017: Preliminary discussion.

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RATING METHODOLOGY

Moody's Global Approach to Rating Securities Backed by Utility Cost Recovery Charges

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» contacts continued on the last page

1. Scope

This methodology describes our global approach to rating securities backed by utility cost recovery charges ("UCRC" bonds) that are established by special legislation and financing orders issued by utility regulatory bodies. The charges backing UCRC bonds rated by us have been established by state legislation and state utility regulatory bodies in the United States. For UCRC bonds backed by charges authorized by other jurisdictions, we will analyze the specifics of the securitization's legal framework and regulations – and their implications for the quality of the protections afforded to investors – within the general methodology described in this report.

Examples of cost recovery charges include those imposed to cover certain costs of utility companies that had been incurred in a regulated environment but could no longer be recovered because of a change to a more competitive regulatory regime (i.e., charges sometimes referred to as "stranded utility charges") and those imposed to pay for environmental cleanups, clean energy or for the replenishment of reserves established for repair of facilities damaged by natural calamities, such as hurricanes or tornados.

2. Executive Summary

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.

This credit rating methodology was republished on June 22, 2015 containing an updated monitoring section and minor other editorial updates in the body of the text and in certain footnotes. The content of this Credit Rating Methodology has not been changed.

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 on the size and economic strength and stability of the ratepayer base against which the costs will be imposed. Therefore, our credit analysis of cost recovery charge securitizations focuses on both legal and economic factors that can influence whether investors in UCRC bonds will be paid as promised.

On the legal side, we assess the extent to which the legislation that authorizes the cost recovery charges[1] 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, our 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, we assess whether the legislation has a government pledge not to impair the utility's right to collect the charges and the consequences if the government nevertheless does attempt to impair the right.

We also examine 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. Furthermore, we consider the breadth of the market to whom the charge will be applied and the extent to which 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.

Our assessment of the overall legal strength of the property right involves qualitative and judgmental factors. 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, our 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, we evaluate (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.[2]

In analyzing a transaction's true-up mechanism, we examine 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. The variables that we typically "stress" test for UCRC bonds are the base against which the charge is to be

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[1] Throughout this report we use the terms "cost recovery charges" and "cost recovery fees" interchangeably.

[2] The true-up mechanism also limits the need to analyze the underwriting of the customer base, since the mechanism adjusts for all shortfalls, including those caused by customer defaults.

applied (usually energy usage) and the servicing fee. To obtain a high rating, we 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. The specific stresses that we place on the variables are issuer-specific and are determined on a case-by-case basis.

In addition, we analyze the implications of other structural features of the securitization that could affect the risk of investor loss. For example, we examine the risk implications of how the cash flows are allocated among the various classes of investors and the other participants in the transaction, and the extent to which any other sources of funds are likely to be sufficient to offset any remaining shortfalls to investors, whether the shortfalls are temporary ("liquidity") or permanent ("credit enhancement").

3. Analyzing the Risk Factors

Because of the unique characteristics of this highly regulated asset class, our credit analysis of UCRC securitizations focuses primarily on the legislation and the true-up mechanism. The degree of certainty that the fees generated through the legislation will be sufficient to pay off the securitizations in full is a complementary aspect of the analysis. .

Depending on the risks and mitigants in the relevant jurisdiction, transaction ratings will typically be positioned between the government rating and the country ceiling. Risks that could lead us to determine transaction ratings to be lower than the country ceiling include, for example, continued high levels of debt burden in a utility system. Such high levels of debt, if deemed unsustainable in the long term, may lead to political pressure to adjust the regulatory framework around the system deficit, with some potential negative impact on the related securitization transactions.

In the following sections, we describe the factors that typically lead to a high degree of certainty and thus high ratings on the bonds.

3.1 Protection against Future Impairment of the Right to Collect the Charges

Utility cost recovery charges are established by special legislation that authorizes the creation of a property right to collect future surcharges on customers' monthly electricity bills as the means to pay back the UCRC bonds. Consequently, we analyze the extent to which investors are protected against the enactment of future legislative changes that would weaken that right. For example, investor risk would be mitigated in a situation in which (1) the legislation contained a pledge by the jurisdiction not to impair the right to collect the special charges until the maturity of the bonds and (2) violation of that pledge would be a violation of law [3].

3.2 Irrevocability of the Financing Order

The legislation is typically accompanied by a financing order issued by the public service commission that authorizes the utilities to impose and collect the surcharges on the customer's monthly electric bill during the term of the bonds. Our analysis assesses whether the financing order is irrevocable, which would protect investors against future adverse changes that may reduce the charges backing the bonds.

3.3 Sufficiency of the Charges and the True-Up Mechanism

The charges are usually assessed as an amount linked to a customer's energy usage. Our analysis considers whether the financing order places any limits on charges – e.g., caps on the levels of charges or limits on the length of time that the charges can be imposed – that might cause the collections to be insufficient to provide for timely payment of the principal and interest on the UCRC bonds. In addition, we analyze whether the period over which the charges are allowed to be levied provides sufficient cushion to pay off the bonds by maturity in the event that collections come in more slowly than originally projected.

[3] Violation of the non-impairment pledge would be a violation of the Contract Clause and the Takings Clause under the Federal and State constitutions.

As part of that analysis, we evaluate the power of any true-up mechanism that is provided for in the legislation and detailed in the financing order to correct for shortfalls that may develop over the life of the securities. A true-up mechanism typically adjusts future fee rates on a scheduled periodic basis (e.g., semiannually or annually) to correct for any under- (or over-) collections in a preceding period and to ensure the full and timely payment of future scheduled debt service, based on updated usage forecasts. The greater the frequency with which the true-up adjustments are made, the less likely that investors will suffer a shortfall at the final maturity date.[4]

That is particularly important as the security approaches the final maturity date; frequent rate adjustments based on then-current projections mitigate the risk that actual collections will deviate substantially from those projections, limiting the possibility of shortfalls at the final maturity date. Consequently, our analysis assesses the conditions under which more frequent true-ups are allowed, especially near the final maturity.[5]

3.4 Non-Bypassability of the Charges

We evaluate whether the charges are "non-bypassable," that is, whether the charges must be collected from all existing and future customers of the utility or its successors or assignees within the utility's service territory, and whether the financing order provides that a severance fee be charged to customers who switch to other service providers within the territory during the life of the bonds. We evaluate any exceptions to the non-bypassabilty rule, and consider the materiality of those exemptions to the cash collections. Charges that cannot be bypassed (i.e., those that cannot be avoided by the customers in the utility's service area) ensure a continuing payer base for the charges, leading to less risk for investors. As described in the Structural Features section (Section 3.8), the power of the true-up mechanism to protect investors is dependent on the non-bypassability of the charges. As a result, non-bypassability (with limited, immaterial exemptions) has been a key factor behind the high ratings that are typically assigned to these transactions, without the need for considerable protection from traditional types of credit protection, such as reserve accounts or subordination.

3.5 Bankruptcy of the Utility

For structures in which the initial owner of the property is a utility, a bankruptcy of the utility could expose securitization investors to the risk that other creditors of the utility might make a claim on the cost recovery charges or that payments to securitization investors might be delayed as a result of an imposition of an automatic stay on payments from the utility company.[6,7] However, that risk would be limited if it were clear that a bankruptcy court would view the transfer of the rights to the charges as a "true sale" of those rights, rather than as a financing of the company. As a result, we analyze whether the legislation clearly establishes the utility's right to receive and transfer the rights to the charges and provides unambiguous procedures for transferring those rights to the financing vehicle as a true sale, and whether those procedures are followed in the financing order.

In cases where the utility is the servicer of the transaction, we analyze whether a bankruptcy of the utility could lead to a disruption in servicing, e.g., billing and collecting. However, given the essential service provided by the utility, we expect that government authorities would intervene to prevent any disruption in servicing that might result from a bankruptcy. As a result, where the servicer is a regulated utility, we view operational risk as low. Consequently, we typically would consider a transaction to be consistent with a Aaa rating even if the servicer were not investment grade, as long as the transaction were structured with some mitigants for operational risk, such as the inclusion of a backup servicer and/or provision for additional liquidity.[8]

[4] Generally, the charges collected rank senior to other charges of a utility system and represent only a small amount of the total revenues of such system .
[5] Transactions typically allow for more frequent true-ups during the "tail period" between the transaction's stated "expected" maturity (determined by the sponsor) and the "legal" final maturity. The legal final maturity is the important date from our rating perspective, the date by which all principal must be repaid.
[6] In some transactions, the property is created by law for the benefit of a public trust or corporation that also is created by the same law. In such cases, the true sale risk would be non-existent as there is no sale or transfer of the property.
[7] For a discussion of how Moody's analyzes legal risks in structured finance transactions, see Moody's Related Research section at the end of this report.
[8] The rating standard for a backup servicer likely would be lower than investment grade, but would depend on the specific facts and circumstances of the transaction and servicer.

In addition, we analyze whether the bankruptcy of the utility could cause a disruption in the remittance of payments by the utility to bondholders. Such a disruption could occur if the remittances of the charges were "commingled" with the other funds of the utility and the bankruptcy court ordered a halt to payments until proper ownership of the funds could be sorted out. Our analysis includes an assessment of the ways in which the utility separates the cost recovery charges received from its other funds and the frequency with which it transfers the funds to the trust.

3.6 Bankruptcy of the Financing Vehicle

Another potential risk to investors in UCRC securitizations is a bankruptcy of the financing vehicle. That could expose investors to the risk that other creditors of the vehicle might make a claim on the cost recovery charges or that payments to investors might be delayed by the imposition of an automatic stay. Consequently, we analyze (1) the likelihood that a third-party creditor would be able to successfully petition the owner of the assets (i.e., the financing vehicle) into an involuntary bankruptcy proceeding or (2) the likelihood that the owner of the assets would voluntarily seek the protection of the bankruptcy courts.

To analyze the likelihood of an involuntary bankruptcy, we assess the characteristics that would mitigate that risk, such as if the financing vehicle had (1) no assets other than the right to the cost recovery charges, (2) no indebtedness other that the securitization debt, (3) limited activities that could give rise to contractual or other liabilities, and (4) agreements with the sponsor and other contracting parties not to petition for the dissolution, liquidation or bankruptcy of the securitization vehicle. Similarly, factors that would mitigate the risk of a voluntary bankruptcy would include (1) charter documents of the owner of the assets that require directors who are independent of the utility and (2) a unanimous vote of directors as a condition to filing a voluntary bankruptcy.

3.7 Economic Factors

Even if the financing order is irrevocable, the charges or the law that authorizes them could be subject to challenge in the courts or to future political pressure to rescind or change them through legislation. That is more likely the higher the charges, i.e., the more the economic incentive for a challenge or in circumstances where the financial imbalances in a utility system increase. Consequently, our economic analysis focuses on the size of the cost recovery charge, both in absolute terms and as a percentage of the customer's energy bill. Typically the percentage of a residential customer's monthly bill devoted to the cost recovery charge is less than 10%.

We typically also look at stressful collection scenarios. For example, in one scenario, we assume (1) that energy usage falls short of the utility's projections[9] by a progressively increasing amount each year (typically 5% per year), (2) that forecasted collections in peak usage months do not materialize (for example, 100% of the collections in the peak month and 50% of the collections in the second highest-usage month), and (3) that the servicing fee is considerably higher than the current, "normal," servicing fee, representing the fee that would be required if the original servicer needed to be replaced in a stressful environment. In another scenario, we typically assume that energy usage is lower than projected by a set amount throughout the life of the securitization (typically 25%). For highly rated transactions, we would expect that the cost recovery charge would remain relatively low even in those highly stressful scenarios.

While the specific stresses that we place on the variables have been quite similar to date, this reflects the fact that all rated transactions to date have involved requests for the highest ratings and been supported by highly diverse, broad-based service areas. However, in general, stresses are issuer-specific and are determined on a case-by-case basis. One of the factors that we use to determine the appropriate stress level for a transaction is the variability of the base against which the charge is applied, for example, the population in the service area or the energy usage in the service area. Customer bases that are less broad-based and diversified tend to be more variable; as a result, we would apply more severe stresses in those situations.

[9] We typically assess the reasonableness of the utility's projections by analyzing (1) the historical energy usage in the utility's service region and the variances between past projections and actual outcomes, and (2) the likely growth in electricity usage in the service area of the utility, taking into account the projected economic growth in the region and the possible competitive impact of technological advances, such as those in the development of solar energy.

In particular, we evaluate the economic diversity of the utility's service region to assess the potential variability in its economic health, which tends to drive changes in population and energy usage. An area that relies on multiple industries for economic growth will likely have a more stable business climate than an area that is dependent on the fortunes of one industry. In the latter case, the area's prospects will falter if that particular industry runs into hard times.

We also consider the mix in the customer base among residential, commercial, and industrial users. A utility with a large residential base relative to commercial and industrial users will tend to have less volatility in energy consumption, since energy consumption by commercial and industrial operations is more closely tied to the business cycle. Furthermore, residential customers are less likely to quickly embrace new energy production technologies and are less likely to cut back energy consumption dramatically if the price of energy were to rise. The higher variability of a commercial and industrial base can be exacerbated further if the service area's customer usage is concentrated in a few large commercial or industrial operations, which could make the overall energy consumption vulnerable if those entities were to decline or leave the area.

3.8 Structural Features

The key structural feature of UCRC transactions is the true-up mechanism. Our rating is highly dependent on the extent to which the mechanism adjusts the charges to correct for past shortfalls or forecasted future shortfalls. The effectiveness of those rate changes in raising funds depends, in turn, on how easily customers can escape the charges and how sensitive electricity usage is to increases in the utility charges. Therefore, our analysis of the true-up mechanism goes together with our analysis of how bypassable the cost recovery charges are and how easily customers can cut back on electricity usage (through alternative sources of energy or conservation). To be consistent with a particular rating, a strong true-up mechanism combined with non-bypassable charges mitigates the need for credit enhancement in the form of alternative sources of funds.

In addition, our analysis of the credit risk of a UCRC transaction incorporates our assessment of the implications of the transaction's cash flow allocation structure (sometimes referred to as the cash flow "waterfall"). In particular, we focus on the seniority of principal and interest payments to the bond's investors *vis-à-vis* payments to other participants. In addition, we analyze the extent to which the transaction has an alternative source of liquidity to pay principal and interest in the event that there is a temporary interruption in the flow of the cost recovery charges. For example, in many transactions there is a capital or reserve account with funds sufficient to pay interest for at least 1-2 months, if needed. Furthermore, we assess the extent to which the credit enhancement that is available in the transaction is likely to be sufficient to offset any shortfalls that might develop in the period between the final true-up adjustment and the maturity of the bonds.

4. Monitoring

In monitoring UCRC transactions, we apply the key components of this methodology. More specifically, we analyze, whether bond balances are in line with the scheduled principal amortization, which indicates the extent to which payments have been in line with our original expectations.

We review the periodic information received and look at whether there has been a draw on the reserve accounts. This data point provides further clues as to the steadiness of the cash flows and accuracy of true-up adjustments.

In addition, we analyze the factors that determine the future strength of the transaction. For example, we monitor any legal or political developments that could indicate an increased risk of changes in the legislation that could impair future cash flows to the transactions. Such risk may materialise, for example, in case of continued high financial imbalances in the system that may lead the system deficit to be viewed as unsustainable over the long-term.

Depending on the jurisdiction, we also follow the rating of the utility as a proxy to assess any changes to the economic health of the service region and the potential for changes in the size and composition of the ratepayer base. Furthermore, we monitor the rating of the utility collecting the charges (as an indicator of its financial condition) to track the risk, typically quite small, that a bankruptcy could lead to disruption in billing and collections and in the remittance of payments to the bondholders.

In other instances, we may be more concerned with the behavior of the regulator of the utility system and less with individual utility companies. This could lead to a lower rating in the space between the local currency ceiling and the sovereign rating or the utility rating.

Thus changes on our expectations and other analytical components could have an impact on the rating of the securities and may result in a reassessment of the rating.

Moody's Related Research

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For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

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From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: Fwd: EXTERNAL - RE: Fair Hydro Plan - question on taxation
Date: Thursday, April 20, 2017 9:41:41 AM

Begin forwarded message:

> **From:** "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>
> **Date:** April 20, 2017 at 9:07:11 AM EDT
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>
> **Subject: FW: EXTERNAL - RE: Fair Hydro Plan - question on taxation**
>
> ---
>
> **From:** Lewis, Robin (MOF)
> **Sent:** April 20, 2017 8:47 AM
> **To:** Nelms, Scott (MOF); Kim, John (OFA); Bruno Amara
> **Cc:** Kwan, Ronald (OFA); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF); Montgomery, Kaitlin (MOF)
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Scott,
> The proposal appears to have some characteristics of a tax avoidance scheme.
> The *Electricity Act, 1998* applies to OPG and its subsidiaries but not a trust. The trust would appear to be subject to regular income tax. However, a trust gets a deduction in computing income for any income paid to a beneficiary. The trust will pay no income tax to the extent that the trust pays out net income to the beneficiaries. Regular tax will not apply on the distribution of income to OPG because OPG is exempt from regular tax.
> I would expect that the income would normally be included in the income of the OPG subsidiary for PIL purposes. I suspect that funds borrowed by the trust may generate significant tax shelter such that the income of the trust will be negligible.
> We will certainly need more information. In particular, the nature of the asset that is being acquired and the vendor. SPV's are generally used to move assets off balance sheet.
> This matter ought to be the subject of a ruling request.
> Regards,
> Rob Lewis
>
> ---
>
> **From:** Nelms, Scott (MOF)
> **Sent:** April 19, 2017 5:48 PM
> **To:** Lewis, Robin (MOF); Kim, John (OFA); Bruno Amara
> **Cc:** Kwan, Ronald (OFA); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF); Montgomery, Kaitlin (MOF)
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Hi Rob, John Bruno,
> Further to the emails below, I received from OPG the attached draft changes to pertinent legislation. These are somewhat broader than the tax / PILs specific elements. I am hoping you get you something more focused, but in the interest of time I thought I would share this version. These changes are essentially consistent with the earlier descriptions below in terms of content. My understanding is that OPG Trust is unlikely to generate significant (non-PILs applied) revenues, so this is largely an administrative change designed to avoid unintended consequences arising from potentially large, unrealized gains associated with swaps etc.
> Please let me know if we should loop anyone else into this conversation (e.g. MoF legal) and whether you would benefit from a conversation with OPG, Torys (OPG's external counsel) and ENE legal directly. I am also available to answer questions on concept. As John knows, all of this is moving extremely quickly so comments as soon as possible would be extremely helpful. My legal colleagues only semi-joking suggested yesterday would be ideal. In the mean time the draft legislation will continue to take up these concepts as they are currently written.
> Thanks very much and apologies for the short notice,
> Scott
> Scott Nelms
> Electricity Investment and Governance Secretariat | Ministry of Finance
> 7th Floor | 375 University ave. | Toronto, ON
> w: (416) 212-6469 | c: (647) 330-2681
> scott.nelms@ontario.ca
>
> ---
>
> **From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> **Sent:** April 18, 2017 9:24 AM
> **To:** Nelms, Scott (MOF); Subrahmanyan, Sriram (MOF)
> **Cc:** Langleben, Ann (MOF); Lewis, Robin (MOF); Klassen, Daniela (MOF); Kim, John (OFA); Bruno Amara
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Hi,
> Please loop in John and Bruno too.
> Thanks,
> Ron
>
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> **From:** Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
> **Sent:** April-17-17 12:53 PM
> **To:** Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Ann Langleben (MOF) <Ann.Langleben@ontario.ca>; Robin Lewis (MOF) <Robin.Lewis@ontario.ca>; Daniela Klassen (MOF) <Daniela.Klassen@ontario.ca>
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Certainly. Will do.
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> **From:** Subrahmanyan, Sriram (MOF)
> **Sent:** April-17-17 12:52 PM
> **To:** Nelms, Scott (MOF); Kwan, Ronald (OFA)
> **Cc:** Langleben, Ann (MOF); Lewis, Robin (MOF); Klassen, Daniela (MOF)
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Could you include Rob in your discussions, so we know exactly what they're proposing?
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> **From:** Nelms, Scott (MOF)
> **Sent:** April 17, 2017 12:50 PM
> **To:** Subrahmanyan, Sriram (MOF); Kwan, Ronald (OFA)
> **Cc:** Langleben, Ann (MOF); Lewis, Robin (MOF); Klassen, Daniela (MOF)
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> **To:** Kwan, Ronald (OFA)
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> **Subject:** Re: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> **From:** Ronald Kwan
> **Sent:** Monday, April 17, 2017 10:44 AM
> **To:** Subrahmanyan, Sriram (MOF)
> **Cc:** Nelms, Scott (MOF)
> **Subject:** Fwd: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> > **From:** "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>
> > **Date:** April 17, 2017 at 9:48:35 AM EDT
> > **To:** "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>
> > **Subject: RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation**
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> > Sent with BlackBerry Work (www.blackberry.com[blackberry.com])
> >
> > From: Ronald Kwan <Ronald.Kwan@ofina.on.ca<mailto:Ronald.Kwan@ofina.on.ca>>
> > Date: Sunday, Apr 16, 2017, 8:50 PM
> > To: Mayman, Gadi (OFA) <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
> > Subject: Re: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> -----Original Message-----
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> From: RYFA Ken -TREASURY [mailto:ken.ryfa@opg.com]
>
> Sent: April-15-17 1:16 PM
>
> To: Nelms, Scott (MOF)
>
> Cc: LEE John -TREASURY; WONG Leslie -LAWDIV; MCAULEY Tyler -LAWDIV
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> Subject: RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> Sent: Thursday, April 13, 2017 8:19 PM
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> Cc: LEE John -TREASURY; WONG Leslie -LAWDIV; MCAULEY Tyler -LAWDIV
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> Subject: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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>
> From: RYFA Ken -TREASURY <ken.ryfa@opg.com<mailto:ken.ryfa@opg.com>>
>
> Date: Thursday, Apr 13, 2017, 6:50 PM
>
> To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
>
> Cc: LEE John -TREASURY <john.s.lee@opg.com<mailto:john.s.lee@opg.com>>, WONG Leslie -LAWDIV <leslie.wong@opg.com<mailto:leslie.wong@opg.com>>, MCAULEY Tyler -LAWDIV <tyler.mcauley@opg.com<mailto:tyler.mcauley@opg.com>>
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> Subject: Fair Hydro Plan - question on taxation
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> I understand there was a question regarding the taxation exclusion reference in Summary document. I understand this question is in reference to the following footnote (which is footnote 4 on page 5):
>
> 4 MOE to confirm that the legislation will provide that any Financing Entity that is a wholly-owned subsidiary of OPG (1) would not be subject to Part VI of the Electricity Act (Ontario) and (2) in the case of any Financing Entity that is a trust, any income of such trust (for purposes of the Income Tax Act (Canada) or the Taxation Act, 2007 Ontario)) which is paid or made payable to OPG or a wholly-owned subsidiary of OPG as a beneficiary of such trust will not be taken into account in calculating the amount of a payment required to be made by OPG (or such subsidiary) by section 89 or 90 of the Electricity Act.
>
> Overall it is expected that the financing entity, either as a trust or a corporation, will have minimal net income. However, there could be tax situations creating a larger income or loss due to differences in timing or treatment (income vs capital). Given the unique nature of the transaction and lack of precedent to guide treatment then there are uncertainties with respect to tax. The objective is to minimize the tax consequences on both entities hence the request identified in the footnote.
>
> Hope this helps.
>
> Thanks,
>
> Ken
>
> _____
>
> _____
>
> THIS MESSAGE IS ONLY INTENDED FOR THE USE OF THE INTENDED RECIPIENT(S) AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, PROPRIETARY AND/OR CONFIDENTIAL. If you are not the intended recipient, you are hereby notified that any review, retransmission, dissemination, distribution, copying, conversion to hard copy or other use of this communication is strictly prohibited. If you are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.
>
> ----------
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This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

From: Gadi Mayman
To: Ronald Kwan; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: Fwd: EXTERNAL - RE: Fair Hydro Plan - question on taxation
Date: Thursday, April 20, 2017 9:41:41 AM

Begin forwarded message:

> **From:** "Subrahmanyan, Sriram (MOF)" <Sriram.Subrahmanyan@ontario.ca>
> **Date:** April 20, 2017 at 9:07:11 AM EDT
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>
> **Subject: FW: EXTERNAL - RE: Fair Hydro Plan - question on taxation**
>
> ---
>
> **From:** Lewis, Robin (MOF)
> **Sent:** April 20, 2017 8:47 AM
> **To:** Nelms, Scott (MOF); Kim, John (OFA); Bruno Amara
> **Cc:** Kwan, Ronald (OFA); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF); Montgomery, Kaitlin (MOF)
> **Subject:** RE: EXTERNAL - RE: Fair Hydro Plan - question on taxation
> Scott,
> The proposal appears to have some characteristics of a tax avoidance scheme.
> The *Electricity Act, 1998* applies to OPG and its subsidiaries but not a trust. The trust would appear to be subject to regular income tax. However, a trust gets a deduction in computing income for any income paid to a beneficiary. The trust will pay no income tax to the extent that the trust pays out net income to the beneficiaries. Regular tax will not apply on the distribution of income to OPG because OPG is exempt from regular tax.
> I would expect that the income would normally be included in the income of the OPG subsidiary for PIL purposes. I suspect that funds borrowed by the trust may generate significant tax shelter such that the income of the trust will be negligible.
> We will certainly need more information. In particular, the nature of the asset that is being acquired and the vendor. SPV's are generally used to move assets off balance sheet.
> This matter ought to be the subject of a ruling request.
> Regards,
> Rob Lewis
>
> ---
>
> **From:** Nelms, Scott (MOF)
> **Sent:** April 19, 2017 5:48 PM
> **To:** Lewis, Robin (MOF); Kim, John (OFA); Bruno Amara
> **Cc:** Kwan, Ronald (OFA); Subrahmanyan, Sriram (MOF); Langleben, Ann (MOF); Montgomery, Kaitlin (MOF)
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> w: (416) 212-6469 | c: (647) 330-2681
> scott.nelms@ontario.ca
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> **From:** Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
> **Sent:** April 18, 2017 9:24 AM
> **To:** Nelms, Scott (MOF); Subrahmanyan, Sriram (MOF)
> **Cc:** Langleben, Ann (MOF); Lewis, Robin (MOF); Klassen, Daniela (MOF); Kim, John (OFA); Bruno Amara
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> **To:** Sriram Subrahmanyan (MOF) <Sriram.Subrahmanyan@ontario.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Cc:** Ann Langleben (MOF) <Ann.Langleben@ontario.ca>; Robin Lewis (MOF) <Robin.Lewis@ontario.ca>; Daniela Klassen (MOF) <Daniela.Klassen@ontario.ca>
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> **Sent:** Monday, April 17, 2017 10:44 AM
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> **Subject:** Fwd: EXTERNAL - RE: Fair Hydro Plan - question on taxation
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> 4 MOE to confirm that the legislation will provide that any Financing Entity that is a wholly-owned subsidiary of OPG (1) would not be subject to Part VI of the Electricity Act (Ontario) and (2) in the case of any Financing Entity that is a trust, any income of such trust (for purposes of the Income Tax Act (Canada) or the Taxation Act, 2007 Ontario)) which is paid or made payable to OPG or a wholly-owned subsidiary of OPG as a beneficiary of such trust will not be taken into account in calculating the amount of a payment required to be made by OPG (or such subsidiary) by section 89 or 90 of the Electricity Act.
>
> Overall it is expected that the financing entity, either as a trust or a corporation, will have minimal net income. However, there could be tax situations creating a larger income or loss due to differences in timing or treatment (income vs capital). Given the unique nature of the transaction and lack of precedent to guide treatment then there are uncertainties with respect to tax. The objective is to minimize the tax consequences on both entities hence the request identified in the footnote.
>
> Hope this helps.
>
> Thanks,
>
> Ken
>
> _____
>
> _____
>
> THIS MESSAGE IS ONLY INTENDED FOR THE USE OF THE INTENDED RECIPIENT(S) AND MAY CONTAIN INFORMATION THAT IS PRIVILEGED, PROPRIETARY AND/OR CONFIDENTIAL. If you are not the intended recipient, you are hereby notified that any review, retransmission, dissemination, distribution, copying, conversion to hard copy or other use of this communication is strictly prohibited. If you are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.
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From:	Ronald Kwan
To:	Gadi Mayman
Cc:	Mike Manning; Ken Kandeepan
Subject:	Fwd: OFA-IESO, discussion re Fair Hydro
Date:	Monday, April 17, 2017 6:33:51 PM

Hi Gadi,

FYI.

Has there been much discussion on this in the Thursday morning meetings?

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> **From:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>
> **Date:** April 17, 2017 at 3:59:19 PM EDT
> **To:** "Scott Nelms (ENERGY)" <Scott.Nelms@ontario.ca>
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Subject: Re: OFA-IESO, discussion re Fair Hydro

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Ron

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Sent: April-17-17 10:52 AM
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Begin forwarded message:

> **From:** Anthony Martinello <Anthony.Martinello@ieso.ca>
> **Date:** April 16, 2017 at 11:55:08 AM EDT
> **To:** Kim Marshall <Kim.Marshall@ieso.ca>, Ronald Kwan <Ronald.Kwan@ofina.on.ca>, Michael Boll <Michael.Boll@ieso.ca>, Mike Manning <Mike.Manning@ofina.on.ca>, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>, Victor Buza <Victor.Buza@ieso.ca>
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> -IESO may need to fund a) Fair Hydro forecast variances (short term), and b) Fair Hydro amounts not purchased by the OPG SPV

(long term);
-in order to minimize costs and maximize cash-flow flexibility (matching to OPG SPV buys) – any appetite to amending the current 28 day minimum for draws;
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-IESO's credit rating agencies (Moody's Aa2, and DBRS) will examine IESO's credit capacities/solvency – need to update IESO/OFA's credit facilities to remove material adverse effect clauses or similar clauses and acknowledge/agree IESO's role in the Fairy Hydro plan and commitment to advance funds under the credit facility if needed for the Fair Hydro cash-flows.
3.General
General comments regarding IESO's Fair Hydro needs vs. IESO regular ongoing needs (corporate and market)
Regards.

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From:	Gadi Mayman
To:	Mike Manning; Bonnie Lemcke; Ken Kandeepan
Cc:	Christina Zhang
Subject:	Fwd: OFHP - Media Briefing-Mar1_800.pptx
Date:	Wednesday, March 01, 2017 10:23:00 PM
Attachments:	OFHP - Media Briefing-Mar1_800.pptx ATT00001.htm

---

Final, final. Prize for whomever finds the change from the last version I sent!

Begin forwarded message:

> **From:** "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Date:** March 1, 2017 at 10:14:54 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Subject: Fw: OFHP - Media Briefing-Mar1_800.pptx**
>
> See below
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Wednesday, March 1, 2017 10:12 PM
> To: Foster, Robert (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
> Subject: RE: OFHP - Media Briefing-Mar1_800.pptx
>
> We made one change. This is the final.
>
> From: Katona, Keley (ENERGY)
> Sent: March-01-17 9:51 PM
> To: Foster, Robert (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fwd: OFHP - Media Briefing-Mar1_800.pptx
>
> Sent from my iPad
>
> Begin forwarded message:
> From: "Imbrogno, Serge (ENERGY)" <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
> Date: March 1, 2017 at 9:49:43 PM EST
> To: "Orsini, Steve (CAB)"

<Steve.Orsini@ontario.ca<mailto:Steve.Orsini@ontario.ca>>, "Davidson, Steven (CAB)" <Steven.Davidson@ontario.ca<mailto:Steven.Davidson@ontario.ca>>, "Thompson, Scott (MOF)" <Scott.Thompson@ontario.ca<mailto:Scott.Thompson@ontario.ca>>, "Angus, Helen (TBS)" <Helen.Angus@ontario.ca<mailto:Helen.Angus@ontario.ca>>
Cc: "Bromm, William (CAB)" <William.Bromm2@ontario.ca<mailto:William.Bromm2@ontario.ca>>, "Katona, Keley (ENERGY)" <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: OFHP - Media Briefing-Mar1_800.pptx
Sorry, this is the final. Disregard my last email.

Ontario's Fair Hydro Plan:
Providing Relief for Consumers

Technical Briefing
Ontario Ministry of Energy

March 2, 2017

Outline of Technical Briefing

1. Overview of Ontario's Electricity Market

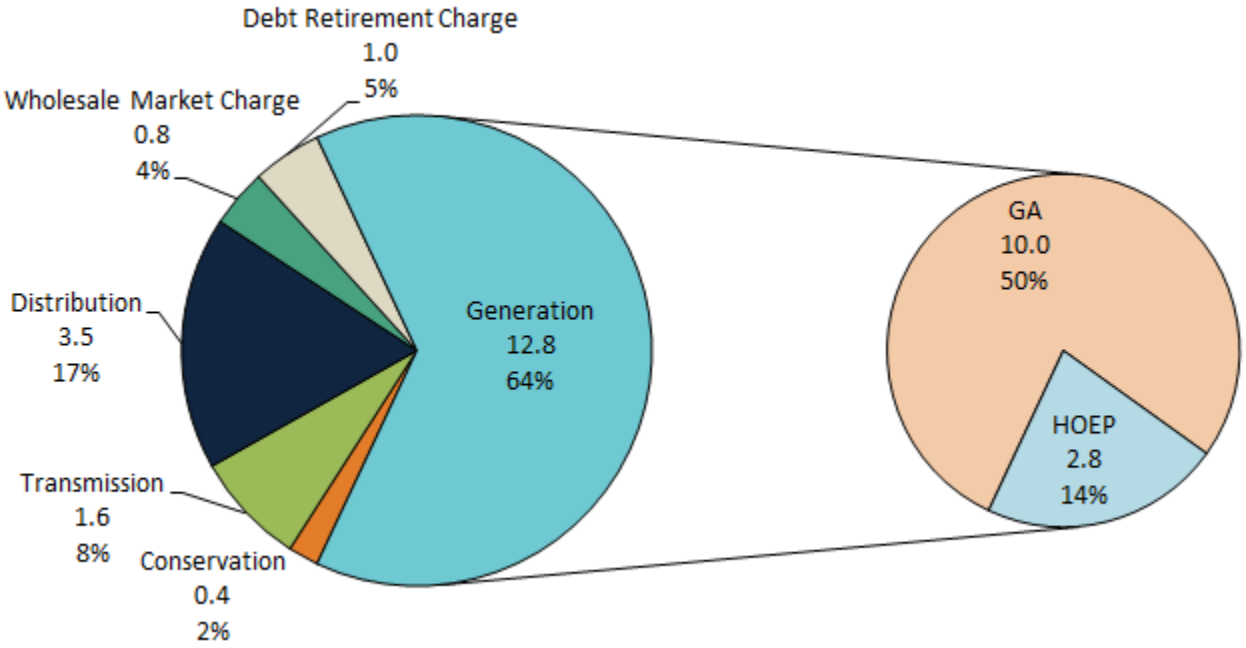
2. Ontario's Fair Hydro Plan – Providing Relief for Consumers

3. Questions

Ontario's Electricity Market

- In 2015, generation accounted for 64% of total electricity system costs. Total system costs in 2015 were $20 billion.

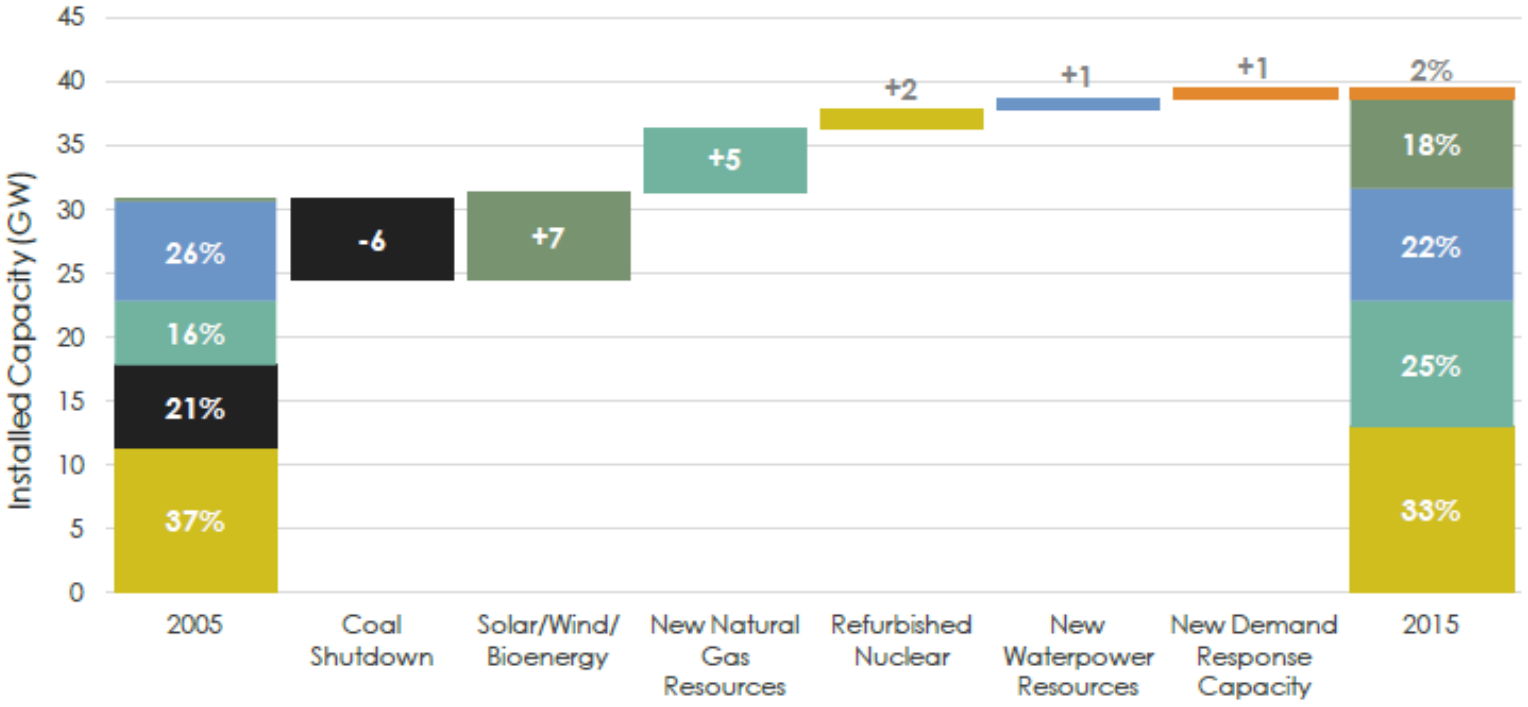
2015 Electricity System Cost
$ billion



Source: IESO

Significant Change in Supply Mix

- Between 2005 and 2015, government invested more than $50 billion in the electricity system, including $35 billion in electricity generation to restore reliability, replace coal and meet environmental objectives.
  - Electricity costs are increasing as necessary investments are made to decarbonize and modernize the province's electricity infrastructure.



Source: *IESO*

Electricity Prices Have Increased

- Since 2010, electricity prices have increased at a rate higher than the Consumer Price Index (CPI).

Typical Residential Electricity Bills
in $ per month, 750 kWh consumption

Source: *Ministry of Energy*

Recent Actions To Mitigate Electricity Rates

- Following the 2016 Throne Speech, several actions were announced to further reduce electricity costs.
  - As of January 1, 2017, Ontario is rebating an amount equal to the provincial portion of the HST to reduce eligible residential, small business and farm electricity bills by 8%.
  - Expanded support available to eligible rural ratepayers by updating Rural or Remote Rate Protection (RRRP) with additional relief, decreasing total electricity bills by an average of $45 each month when combined with the 8% rebate.
  - Expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants.
  - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.
  - Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – up to $129 million in cost savings.

Ontario’s Fair Hydro Plan

Ontario's Fair Hydro Plan

- Ontario is lowering electricity bills by 25 per cent for the typical residential customer and holding rate increases to the rate of inflation for four years. Small businesses and farms would also benefit from this initiative.

- People with low incomes, those served by local distribution companies (LDCs) with the highest distribution costs, OESP recipients and On-Reserve First Nation households would benefit from even greater reductions to their electricity bills.

- These new measures will cost the government up to $2.5 billion over the next three years.

- Government intends to introduce legislation to enable Ontario's Fair Hydro Plan.

1. Refinancing Global Adjustment

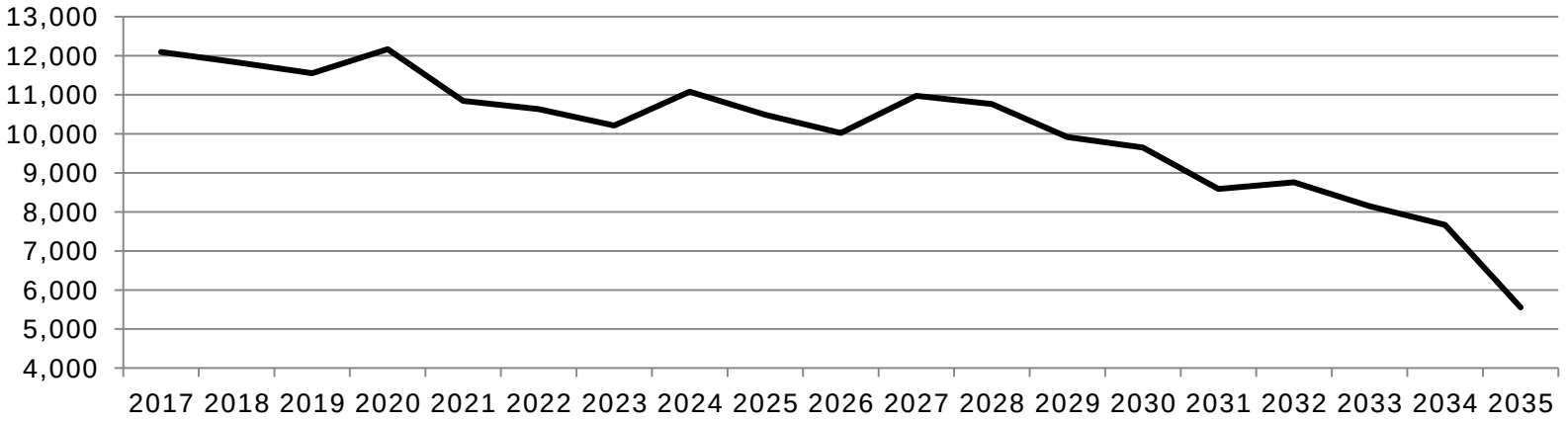
Refinancing the Global Adjustment

- Refinancing the Global Adjustment (GA) would provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
  - 25% reduction on average for the typical residential customer and rates would follow inflation for the next 4 years.

- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about $2.5 billion per year on average over the first ten years, with a maximum annual interest cost of $1.4 billion.

- This measure would share the associated costs more fairly. The chart below shows how Global Adjustment (GA) cost is front-end loaded and forecast to decline over time.

Forecast Global Adjustment Cost (nominal $ million)



Source: IESO

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract term.

- By recognizing that generation assets are expected to continue to provide benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

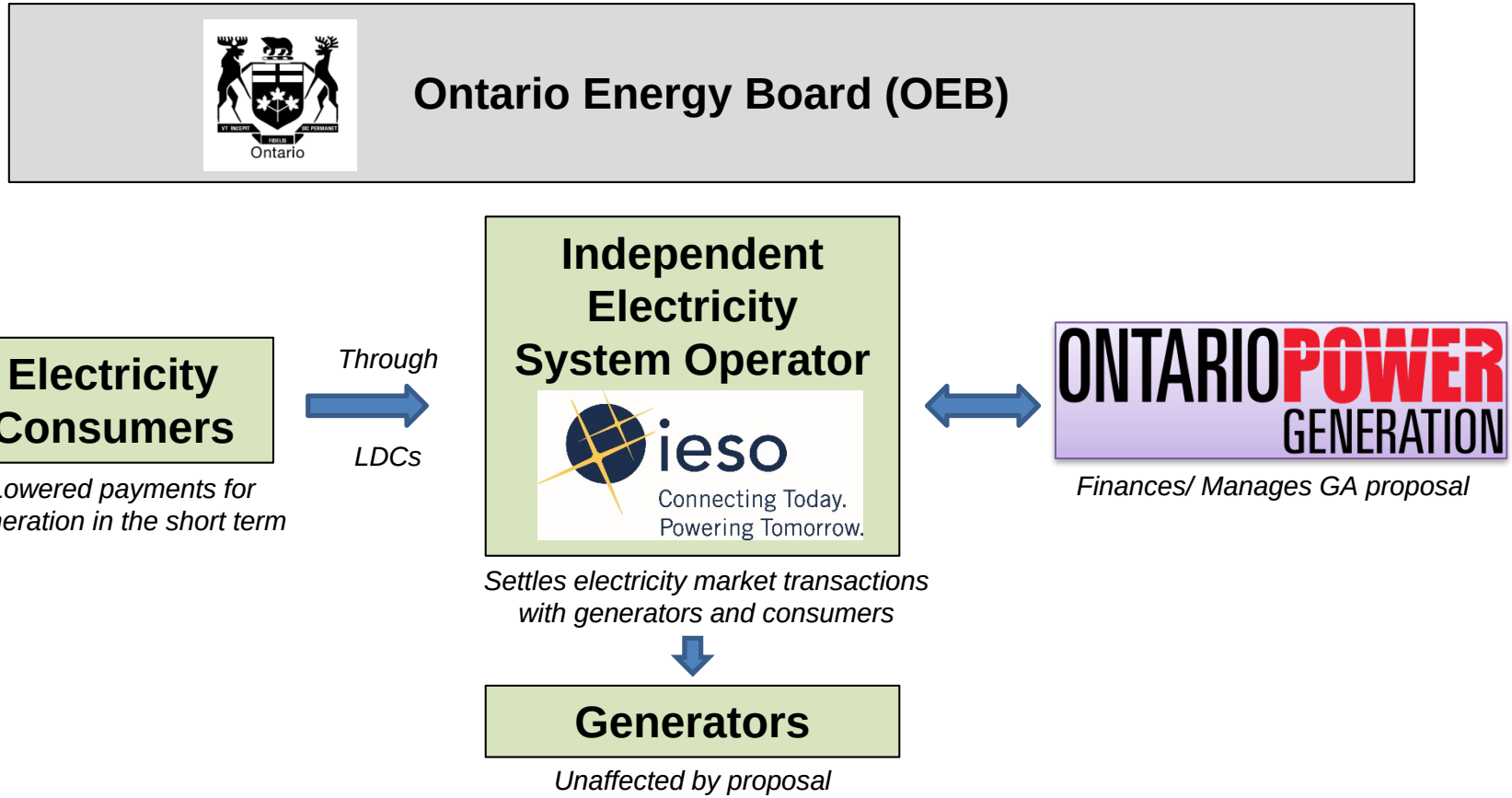
- In the early years, a portion of the costs covered by the GA would be financed to reduce pressure on electricity ratepayers.

- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be recovered from ratepayers.

"The amount consumers pay today could be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged to households would more closely reflect the true economic costs of the assets."
Globe and Mail Op-Ed (February 28, 2017) – Ivey Business School

Implementation

- The following entities would implement the proposed Global Adjustment (GA) refinancing mechanism.
  - The government intends to introduce legislation that would, if passed, enable IESO and OPG to work together to refinance the GA over a longer period of time. The legislation would also outline the role for the OEB, as it relates to the financing proposal.



2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Fair Hydro Plan initiatives to help vulnerable consumers include:
  - Broadening Rural or Remote Rate Protection (RRRP) program to provide distribution charge relief for the customers of the costliest local distribution companies (LDCs).
  - Enhancing the Ontario Electricity Support Program (OESP) and working to ensure the program uptake is as close as possible to 100%.
  - Establishing a new First Nations On-Reserve Delivery Credit.
  - Establishing a new Affordability Fund which would support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.

- All of these initiatives would provide benefits to eligible consumers on top of the benefits they would receive from Global Adjustment (GA) refinancing.

- As part of the Fair Hydro Plan, these programs would be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
  - These programs would be funded by provincial revenues because they all provide targeted benefits to vulnerable consumers.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- Rural or Remote Rate Protection (RRRP) provides a rate subsidy to rural or remote residential customers who are faced with higher distribution costs compared to urban areas.
  - The RRRP is currently provided to approximately 350,000 Hydro One R2 residential customers in Ontario.

- The Province would expand the RRRP to provide distribution charge relief to additional hydro customers served by local distribution companies (LDCs) with the highest distribution rates, including: Hydro One R1, Northern Ontario Wires Inc., Lakeland Parry Sound, Chapleau PUC, Sioux Lookout Hydro, InnPower, Atikokan Hydro and Algoma Power. This would extend RRRP availability to about 800,000 customers.

- The new benefits would vary from LDC to LDC. For example:
  - A Hydro One R2 customer consuming 2,500kWh a month would see distribution cost reductions of around $75 a month.
  - A Hydro One R1 customer consuming 1,000kWh a month would see distribution cost reductions of around $18 a month.
  - An InnPower customer consuming 1,000kWh a month would see distribution cost reductions of around $12 a month.

- The government intends to introduce legislation to broaden the RRRP and to move forward in having RRRP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Enhancing the Ontario Electricity Support Program (OESP)

- The OESP would be enhanced by increasing its monthly credits by 50%, expanded to cover more low-income Ontarians, and increasing uptake to as close to 100% as possible.
  - Sliding Scale #1 outlines basic program benefits, and Sliding Scale #2 outlines enhanced benefits for Indigenous households, electrically heated households, and households with certain medically intensive medical equipment.
- The government intends to introduce legislation to enhance the OESP and to move forward in having OESP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Existing OESP Credit Scales

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$30	$30	$34	$38	$42	$50	$50
$28,001 - $39,000			$30	$34	$38	$42	$50
$39,001 - $48,000					$30	$34	$38
$48,001 - $52,000							$30

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$50	$55	$60	$75	$75
$28,001 - $39,000			$45	$50	$55	$60	$75
$39,001 - $48,000					$45	$50	$55
$48,001 - $52,000							$45

Proposed +50% OESP Credit Increase*

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
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$39,001 - $48,000			$35	$40	$45	$51	$57
$48,001 - $52,000					$35	$40	$45

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$68	$68	$75	$83	$90	$113	$113
$28,001 - $39,000		$60	$68	$75	$83	$90	$113
$39,001 - $48,000			$52	$60	$68	$75	$83
$48,001 - $52,000					$52	$60	$68

***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.

- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups, developed the following recommendations:
  - Eliminating the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of $85.
  - Automatically qualify on-reserve First Nations households (~21,500 customers).

- The government intends to introduce legislation to create the First Nations On-Reserve Delivery Credit and to move forward in having its costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

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- The Province intends to work with Hydro One, in consultation with all other LDCs, to establish an independent Trust to serve as the administrator of the Affordability Fund.

- The Province would pay for the Fund through provincial revenues.

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- The Industrial Conservation Initiative (ICI) provides a strong incentive for participating consumers to reduce their consumption during peak hours to reduce their costs.

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  - Extending eligibility to small manufacturers and industrials with average monthly peak demand over 500 kilowatts; and
  - Targeting eligibility to energy intensive industries with the North American Industry Classification System (NAICS) codes 31 - 33 (i.e., Manufacturing).

- Under the expanded ICI, small manufacturers and industrials whose electricity demand is currently too low to qualify for ICI, would now be eligible for the expanded ICI if they wish to participate.

- Small manufacturers would also benefit from funding social programs through provincial revenues.

- In addition, the Ministry would assist small manufacturers and industrials' participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

4. Market Efficiencies / Bending the Cost Curve

Ongoing Efforts To Bend The Cost Curve of Ontario's Electricity System

- Since 2010, the government has taken a number of important actions to reduce electricity system costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
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- The Ontario Energy Board (OEB) regulates and licences more than 70 Local Distribution Companies (LDCs) in the province. The OEB would identify opportunities for cost efficiencies by:
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- The IESO plans for the province’s electricity needs, balances the supply and demand for electricity in Ontario in real time and administers conservation programs.

- The IESO’s Market Renewal includes such initiatives as developing a capacity auction process, introducing a day-ahead energy market, etc.

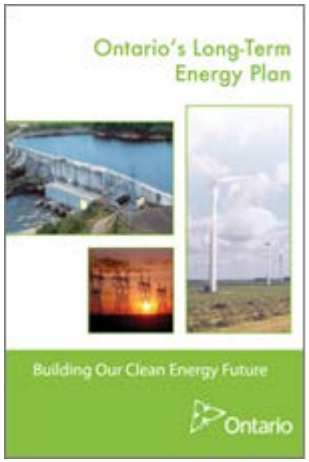
- Changes related to IESO’s Market Renewal initiatives are estimated to save at least $200 million per year, starting in 2021.

2017 Long-Term Energy Plan

- The Ministry of Energy is developing the next Long-Term Energy Plan (LTEP) after receiving feedback from the public, stakeholders and indigenous communities during the engagement process that took place from October to January 2017.

- The LTEP process is designed to be iterative and flexible and only commit resources as demand needs become clearer.

- The Ministry of Energy anticipates that the next LTEP will be published in spring 2017.



From:	Gadi Mayman
To:	Mike Manning; Ken Kandeepan; Bonnie Lemcke
Cc:	Christina Zhang
Subject:	Fwd: OFHP - Media Briefing-Mar1_800.pptx
Date:	Wednesday, March 01, 2017 10:12:40 PM
Attachments:	OFHP - Media Briefing-Mar1_800.pptx ATT00001.htm

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Begin forwarded message:

> **From:** "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Date:** March 1, 2017 at 9:51:50 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Subject: Fw: OFHP - Media Briefing-Mar1_800.pptx**
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> Looks like there was a mistake. Use this version.
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> Sent from my BlackBerry 10 smartphone on the Rogers network.
> Original Message
> From: Thompson, Scott (MOF) <Scott.Thompson@ontario.ca>
> Sent: Wednesday, March 1, 2017 9:49 PM
> To: McLean, David (MOF)
> Subject: FW: OFHP - Media Briefing-Mar1_800.pptx
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> _____
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Ontario's Fair Hydro Plan:
Providing Relief for Consumers

Technical Briefing
Ontario Ministry of Energy

March 2, 2017

Outline of Technical Briefing

1. Overview of Ontario's Electricity Market

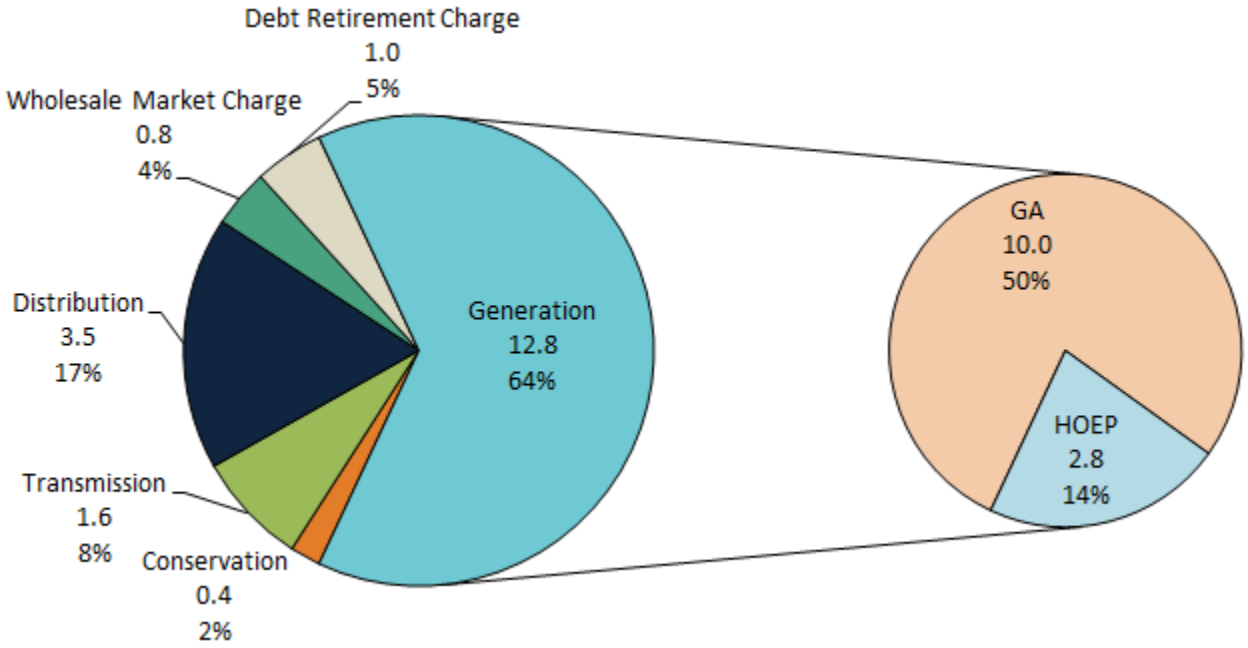
2. Ontario's Fair Hydro Plan – Providing Relief for Consumers

3. Questions

Ontario's Electricity Market

- In 2015, generation accounted for 64% of total electricity system costs. Total system costs in 2015 were $20 billion.

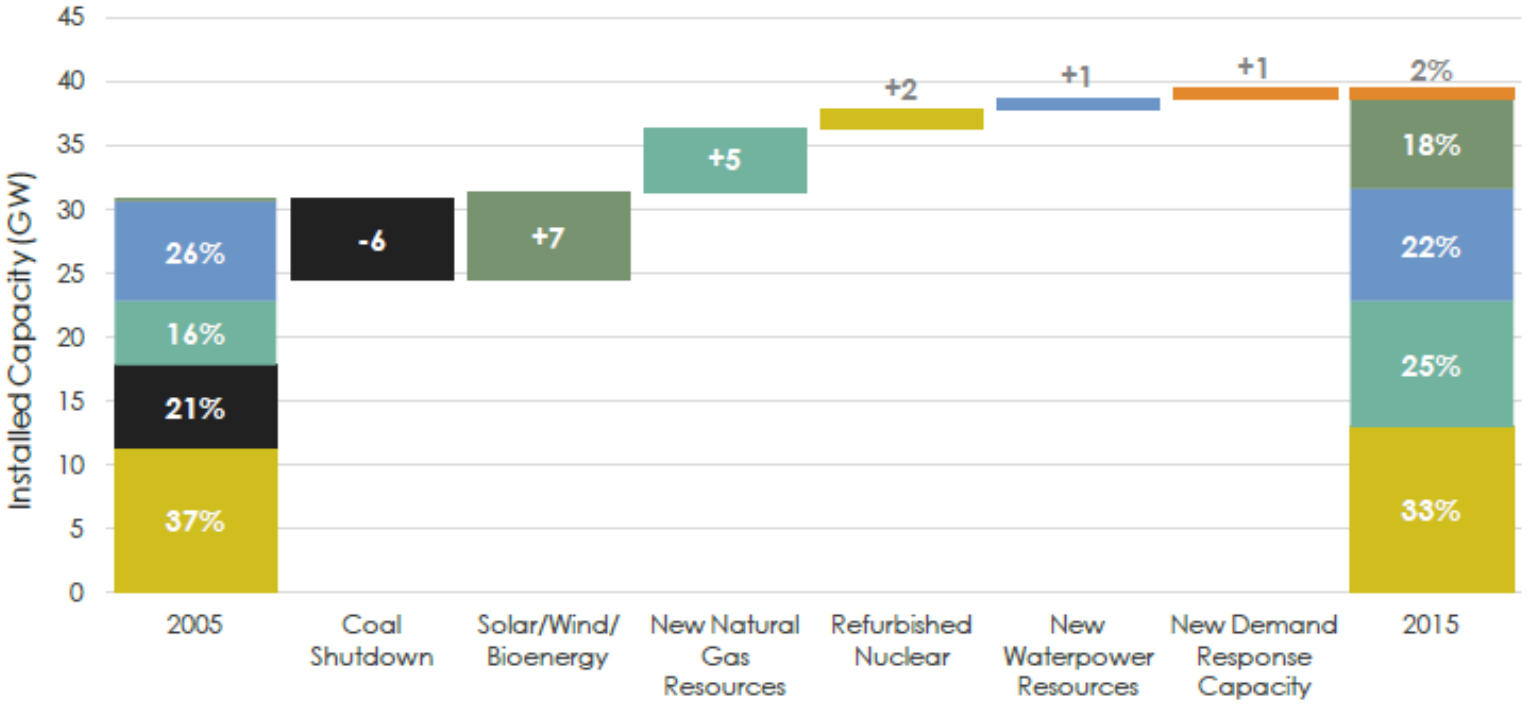
2015 Electricity System Cost
$ billion



Source: IESO

Significant Change in Supply Mix

- Between 2005 and 2015, government invested more than $50 billion in the electricity system, including $35 billion in electricity generation to restore reliability, replace coal and meet environmental objectives.
  - Electricity costs are increasing as necessary investments are made to decarbonize and modernize the province's electricity infrastructure.



Source: *IESO*

Electricity Prices Have Increased

- Since 2010, electricity prices have increased at a rate higher than the Consumer Price Index (CPI).

Typical Residential Electricity Bills
in $ per month, 750 kWh consumption

Source: *Ministry of Energy*

Recent Actions To Mitigate Electricity Rates

- Following the 2016 Throne Speech, several actions were announced to further reduce electricity costs.
  - As of January 1, 2017, Ontario is rebating an amount equal to the provincial portion of the HST to reduce eligible residential, small business and farm electricity bills by 8%.
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  - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.
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Ontario's Fair Hydro Plan

- Ontario is lowering electricity bills by 25 per cent for the typical residential customer and holding rate increases to the rate of inflation for four years. Small businesses and farms would also benefit from this initiative.

- People with low incomes, those served by local distribution companies (LDCs) with the highest distribution costs, OESP recipients and On-Reserve First Nation households would benefit from even greater reductions to their electricity bills.

- These new measures will cost the government up to $2.5 billion over the next three years.

- Government intends to introduce legislation to enable Ontario's Fair Hydro Plan.

1. Refinancing Global Adjustment

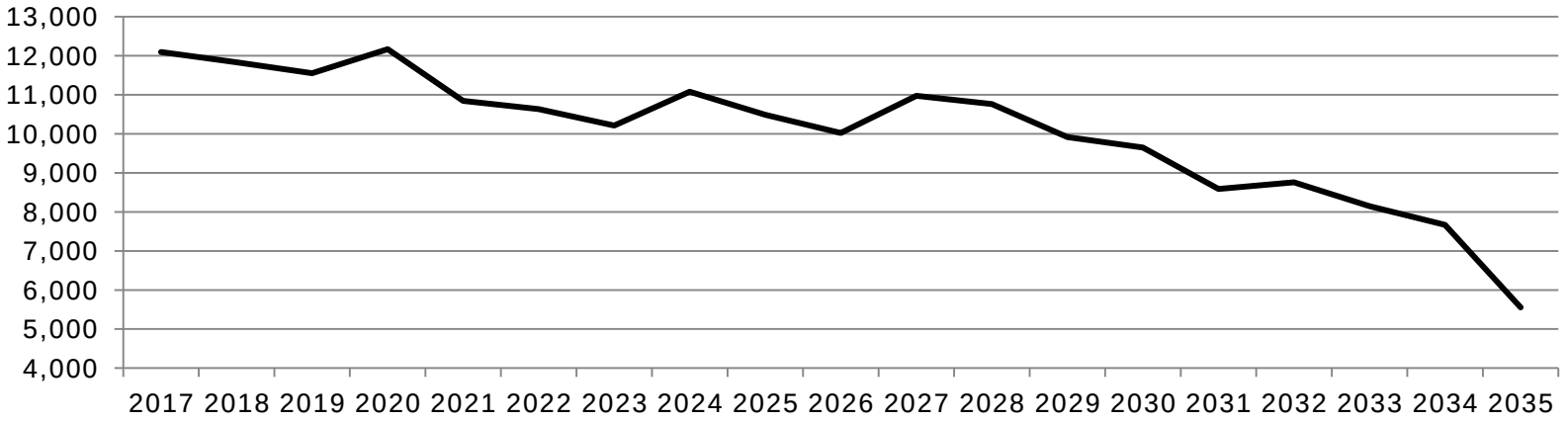
Refinancing the Global Adjustment

- Refinancing the Global Adjustment (GA) would provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
  - 25% reduction on average for the typical residential customer and rates would follow inflation for the next 4 years.

- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about $2.5 billion per year on average over the first ten years, with a maximum annual interest cost of $1.4 billion.

- This measure would share the associated costs more fairly. The chart below shows how Global Adjustment (GA) cost is front-end loaded and forecast to decline over time.

Forecast Global Adjustment Cost (nominal $ million)



Source: IESO

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract term.

- By recognizing that generation assets are expected to continue to provide benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

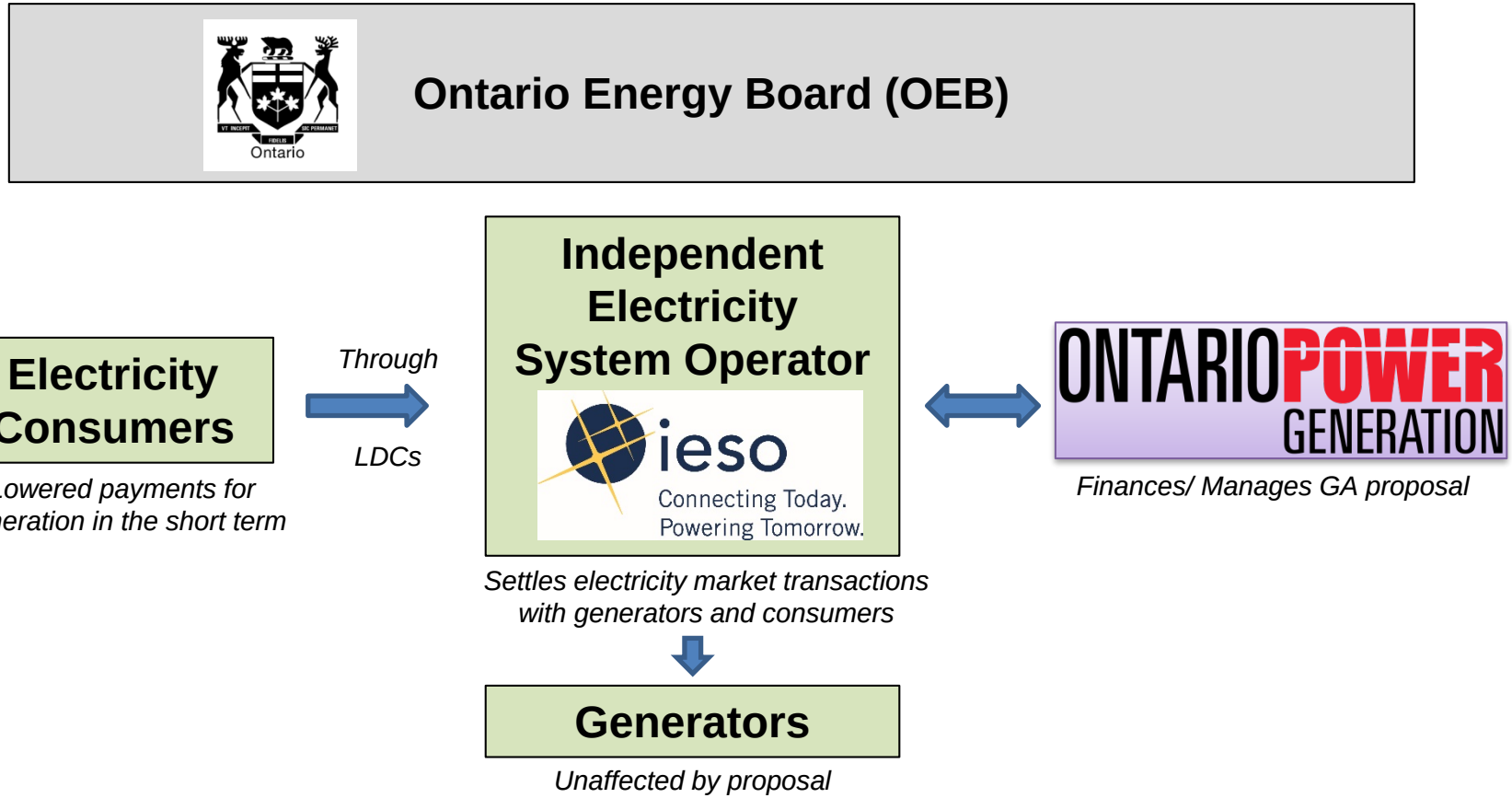
- In the early years, a portion of the costs covered by the GA would be financed to reduce pressure on electricity ratepayers.

- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be recovered from ratepayers.

"The amount consumers pay today could be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged to households would more closely reflect the true economic costs of the assets."
Globe and Mail Op-Ed (February 28, 2017) – Ivey Business School

Implementation

- The following entities would implement the proposed Global Adjustment (GA) refinancing mechanism.
  - The government intends to introduce legislation that would, if passed, enable IESO and OPG to work together to refinance the GA over a longer period of time. The legislation would also outline the role for the OEB, as it relates to the financing proposal.



2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Fair Hydro Plan initiatives to help vulnerable consumers include:
  - Broadening Rural or Remote Rate Protection (RRRP) program to provide distribution charge relief for the customers of the costliest local distribution companies (LDCs).
  - Enhancing the Ontario Electricity Support Program (OESP) and working to ensure the program uptake is as close as possible to 100%.
  - Establishing a new First Nations On-Reserve Delivery Credit.
  - Establishing a new Affordability Fund which would support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.

- All of these initiatives would provide benefits to eligible consumers on top of the benefits they would receive from Global Adjustment (GA) refinancing.

- As part of the Fair Hydro Plan, these programs would be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
  - These programs would be funded by provincial revenues because they all provide targeted benefits to vulnerable consumers.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- Rural or Remote Rate Protection (RRRP) provides a rate subsidy to rural or remote residential customers who are faced with higher distribution costs compared to urban areas.
  - The RRRP is currently provided to approximately 350,000 Hydro One R2 residential customers in Ontario.

- The Province would expand the RRRP to provide distribution charge relief to additional hydro customers served by local distribution companies (LDCs) with the highest distribution rates, including: Hydro One R1, Northern Ontario Wires Inc., Lakeland Parry Sound, Chapleau PUC, Sioux Lookout Hydro, InnPower, Atikokan Hydro and Algoma Power. This would extend RRRP availability to about 800,000 customers.

- The new benefits would vary from LDC to LDC. For example:
  - A Hydro One R2 customer consuming 2,500kWh a month would see distribution cost reductions of around $75 a month.
  - A Hydro One R1 customer consuming 1,000kWh a month would see distribution cost reductions of around $18 a month.
  - An InnPower customer consuming 1,000kWh a month would see distribution cost reductions of around $12 a month.

- The government intends to introduce legislation to broaden the RRRP and to move forward in having RRRP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Enhancing the Ontario Electricity Support Program (OESP)

- The OESP would be enhanced by increasing its monthly credits by 50%, expanded to cover more low-income Ontarians, and increasing uptake to as close to 100% as possible.
  - Sliding Scale #1 outlines basic program benefits, and Sliding Scale #2 outlines enhanced benefits for Indigenous households, electrically heated households, and households with certain medically intensive medical equipment.
- The government intends to introduce legislation to enhance the OESP and to move forward in having OESP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

Existing OESP Credit Scales

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$30	$30	$34	$38	$42	$50	$50
$28,001 - $39,000			$30	$34	$38	$42	$50
$39,001 - $48,000					$30	$34	$38
$48,001 - $52,000							$30

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$45	$45	$50	$55	$60	$75	$75
$28,001 - $39,000			$45	$50	$55	$60	$75
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Proposed +50% OESP Credit Increase*

Sliding Scale #1	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
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$39,001 - $48,000			$35	$40	$45	$51	$57
$48,001 - $52,000					$35	$40	$45

Sliding Scale #2	Household Size						
Income Bracket	1	2	3	4	5	6	7 +
< $28,000	$68	$68	$75	$83	$90	$113	$113
$28,001 - $39,000		$60	$68	$75	$83	$90	$113
$39,001 - $48,000			$52	$60	$68	$75	$83
$48,001 - $52,000					$52	$60	$68

***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.

- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups, developed the following recommendations:
  - Eliminating the delivery charge for all on-reserve First Nations households and removing the monthly service charge for customers of licensed distributors which charge a bundled rate. The OEB estimates this would provide residential customers an average monthly benefit of $85.
  - Automatically qualify on-reserve First Nations households (~21,500 customers).

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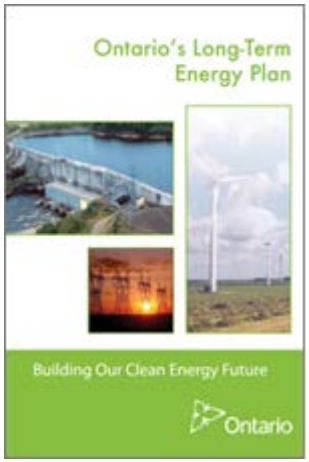

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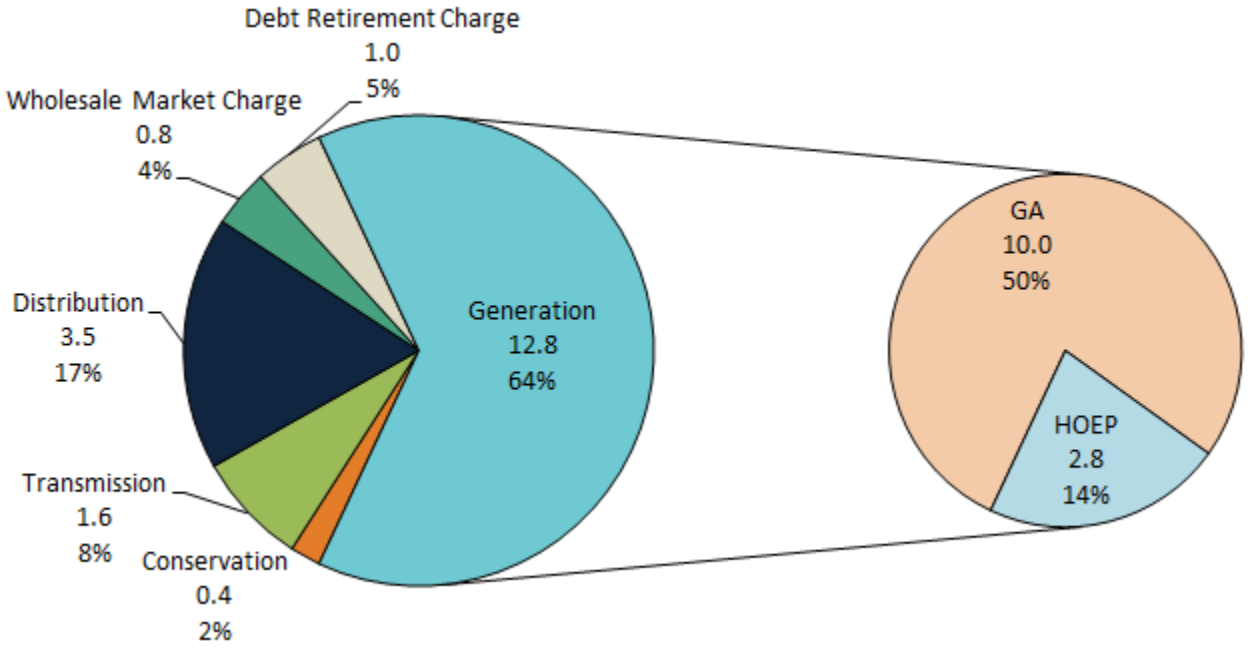

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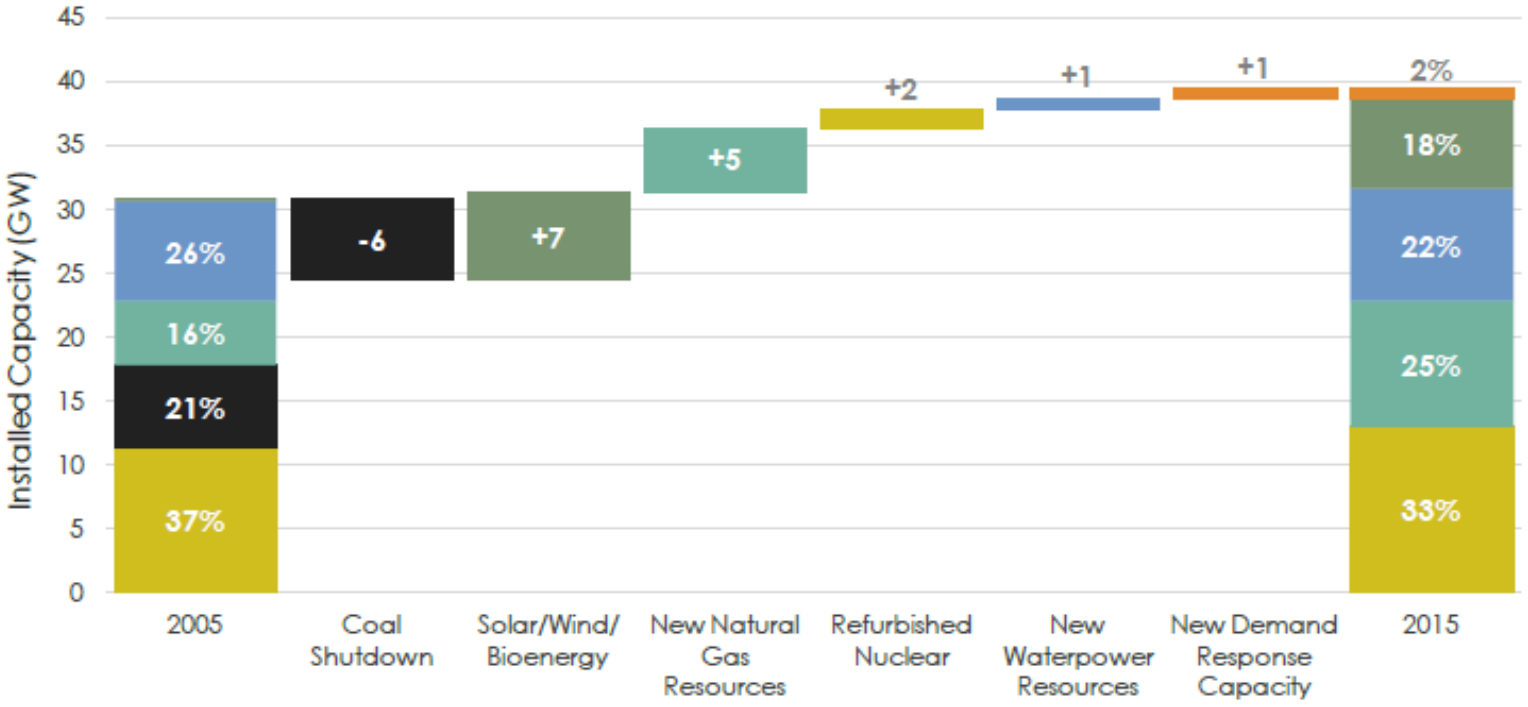

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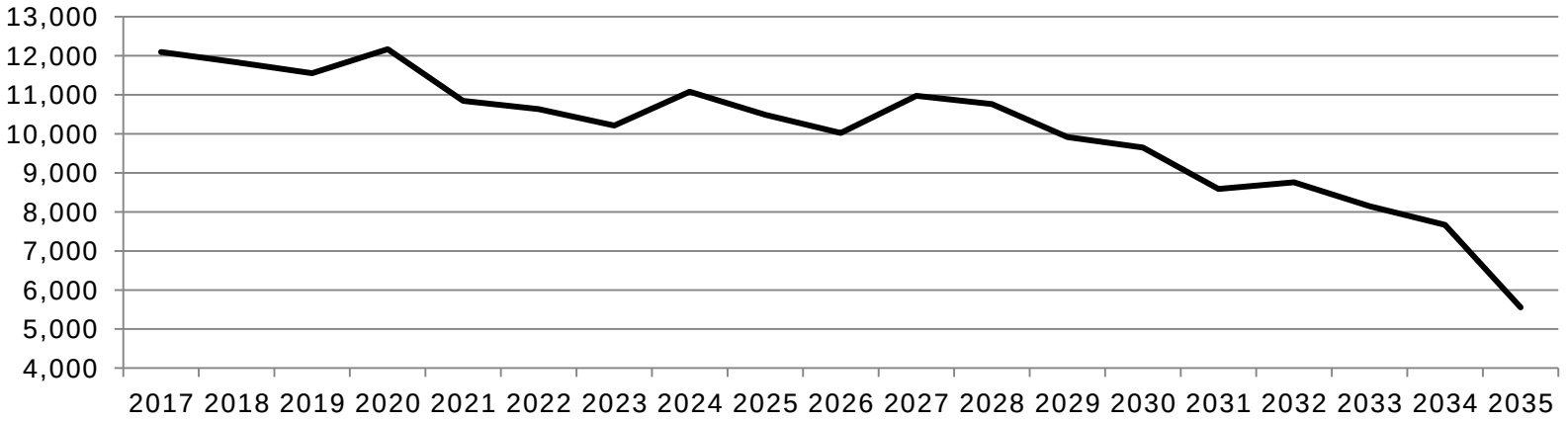

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- In the later years, when some system costs are expected to be reduced due to continued operation of existing assets under 20-year contracts, the cost of financing would be recovered from ratepayers.

"The amount consumers pay today could be reduced by stretching capital amortization periods to match the expected productive lives of the assets. In this way, the costs of generation charged to households would more closely reflect the true economic costs of the assets."
Globe and Mail Op-Ed (February 28, 2017) – Ivey Business School

Implementation

- The following entities would implement the proposed Global Adjustment (GA) refinancing mechanism.
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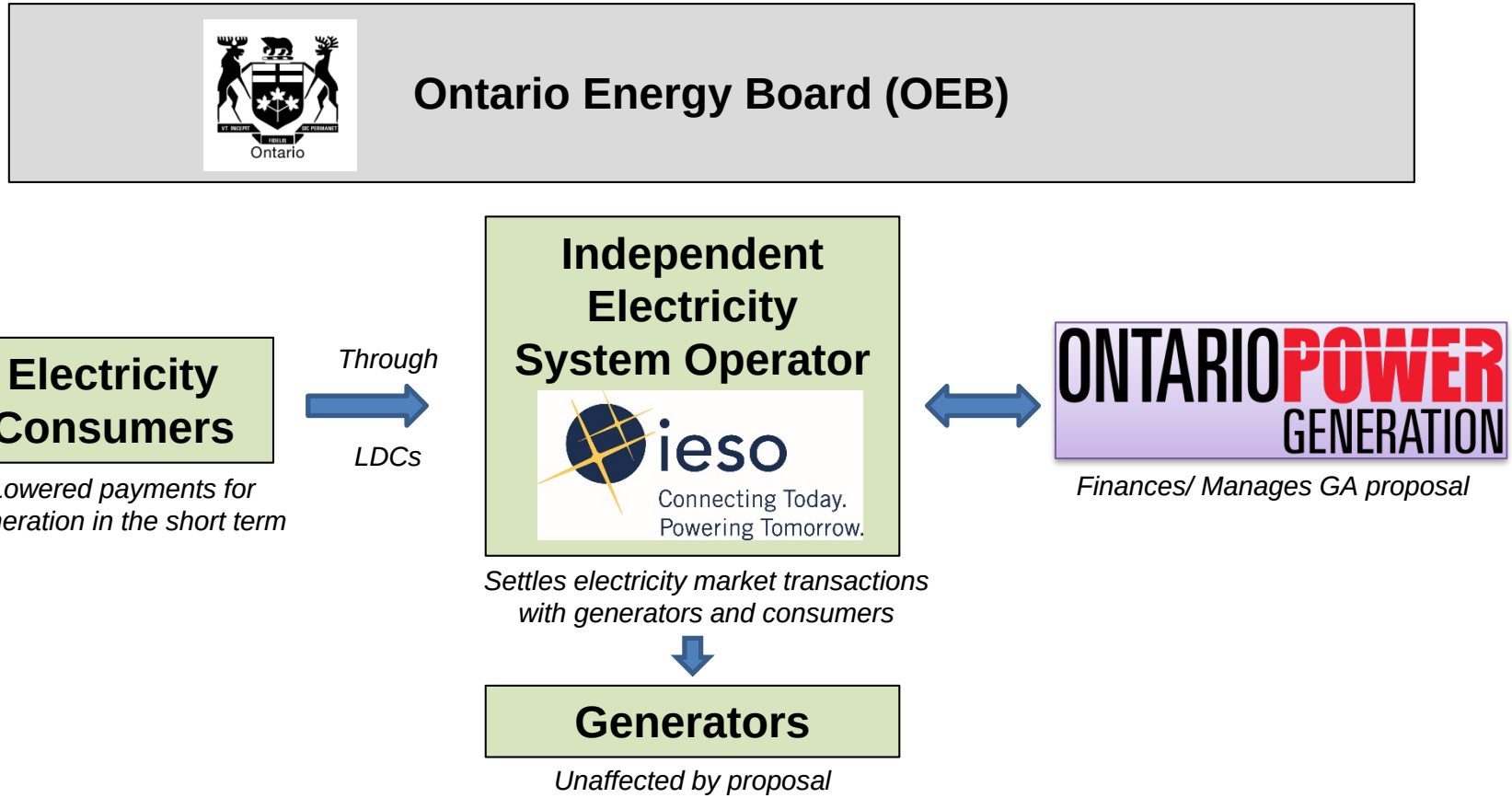

2. Helping Vulnerable Consumers

Helping Vulnerable Electricity Consumers

- Fair Hydro Plan initiatives to help vulnerable consumers include:
  - Broadening Rural or Remote Rate Protection (RRRP) program to provide distribution charge relief for the customers of the costliest local distribution companies (LDCs).
  - Enhancing the Ontario Electricity Support Program (OESP) and working to ensure the program uptake is as close as possible to 100%.
  - Establishing a new First Nations On-Reserve Delivery Credit.
  - Establishing a new Affordability Fund which would support Ontarians who have difficulty paying their electricity bills to be able to access energy efficiency improvements.

- All of these initiatives would provide benefits to eligible consumers on top of the benefits they would receive from Global Adjustment (GA) refinancing.

- As part of the Fair Hydro Plan, these programs would be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.
  - These programs would be funded by provincial revenues because they all provide targeted benefits to vulnerable consumers.

Broadening Rural or Remote Electricity Rate Protection (RRRP)

- Rural or Remote Rate Protection (RRRP) provides a rate subsidy to rural or remote residential customers who are faced with higher distribution costs compared to urban areas.
  - The RRRP is currently provided to approximately 350,000 Hydro One R2 residential customers in Ontario.

- The Province would expand the RRRP to provide distribution charge relief to additional hydro customers served by local distribution companies (LDCs) with the highest distribution rates, including: Hydro One R1, Northern Ontario Wires Inc., Lakeland Parry Sound, Chapleau PUC, Sioux Lookout Hydro, InnPower, Atikokan Hydro and Algoma Power. This would extend RRRP availability to about 800,000 customers.

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- The government intends to introduce legislation to broaden the RRRP and to move forward in having RRRP costs be funded by provincial revenues, reducing regulatory charges for all Ontario ratepayers.

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- The OESP would be enhanced by increasing its monthly credits by 50%, expanded to cover more low-income Ontarians, and increasing uptake to as close to 100% as possible.
  - Sliding Scale #1 outlines basic program benefits, and Sliding Scale #2 outlines enhanced benefits for Indigenous households, electrically heated households, and households with certain medically intensive medical equipment.
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***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

First Nations On-Reserve Delivery Credit

- In 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to develop options for a First Nation delivery credit for households.

- The OEB, engaging with First Nations, including remote communities, the distributors serving them, and consumer groups, developed the following recommendations:
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- Small manufacturers would also benefit from funding social programs through provincial revenues.

- In addition, the Ministry would assist small manufacturers and industrials' participation in ICI through a targeted outreach campaign delivered by the Ontario Chamber of Commerce (OCC).

4. Market Efficiencies / Bending the Cost Curve

Ongoing Efforts To Bend The Cost Curve of Ontario's Electricity System

- Since 2010, the government has taken a number of important actions to reduce electricity system costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
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- The IESO plans for the province’s electricity needs, balances the supply and demand for electricity in Ontario in real time and administers conservation programs.

- The IESO’s Market Renewal includes such initiatives as developing a capacity auction process, introducing a day-ahead energy market, etc.

- Changes related to IESO’s Market Renewal initiatives are estimated to save at least $200 million per year, starting in 2021.

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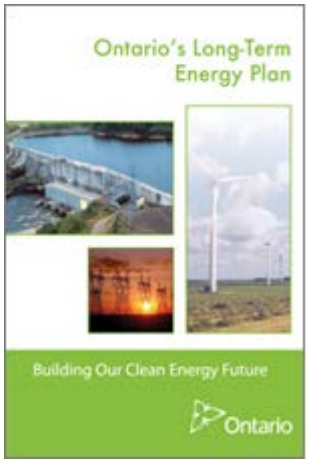

Sent from my iPad

From:	Gadi Mayman
To:	Mike Manning; Bonnie Lemcke; Ken Kandeepan
Cc:	Christina Zhang
Subject:	Fwd: OFHP - Media Briefing-Mar1_800.pptx
Date:	Wednesday, March 01, 2017 10:23:00 PM
Attachments:	OFHP - Media Briefing-Mar1_800.pptx ATT00001.htm

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Final, final. Prize for whomever finds the change from the last version I sent!

Begin forwarded message:

> **From:** "McLean, David (MOF)" <David.McLean@ontario.ca>
> **Date:** March 1, 2017 at 10:14:54 PM EST
> **To:** "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
> **Cc:** "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
> **Subject: Fw: OFHP - Media Briefing-Mar1_800.pptx**
>
> See below
>
> Sent from my BlackBerry 10 smartphone on the Rogers network.
> From: Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>
> Sent: Wednesday, March 1, 2017 10:12 PM
> To: Foster, Robert (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Cc: Bromm, William (CAB); Kwamena, Boafoa (CAB)
> Subject: RE: OFHP - Media Briefing-Mar1_800.pptx
>
> We made one change. This is the final.
>
> From: Katona, Keley (ENERGY)
> Sent: March-01-17 9:51 PM
> To: Foster, Robert (CAB); MacIntyre, Kyle (TBS); McLean, David (MOF)
> Subject: Fwd: OFHP - Media Briefing-Mar1_800.pptx
>
> Sent from my iPad
>
> Begin forwarded message:
> From: "Imbrogno, Serge (ENERGY)" <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
> Date: March 1, 2017 at 9:49:43 PM EST
> To: "Orsini, Steve (CAB)"

<Steve.Orsini@ontario.ca<mailto:Steve.Orsini@ontario.ca>>, "Davidson, Steven (CAB)" <Steven.Davidson@ontario.ca<mailto:Steven.Davidson@ontario.ca>>, "Thompson, Scott (MOF)" <Scott.Thompson@ontario.ca<mailto:Scott.Thompson@ontario.ca>>, "Angus, Helen (TBS)" <Helen.Angus@ontario.ca<mailto:Helen.Angus@ontario.ca>>
Cc: "Bromm, William (CAB)" <William.Bromm2@ontario.ca<mailto:William.Bromm2@ontario.ca>>, "Katona, Keley (ENERGY)" <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: OFHP - Media Briefing-Mar1_800.pptx
Sorry, this is the final. Disregard my last email.

Ontario's Fair Hydro Plan:
Providing Relief for Consumers

Technical Briefing
Ontario Ministry of Energy

March 2, 2017

Outline of Technical Briefing

1. Overview of Ontario's Electricity Market

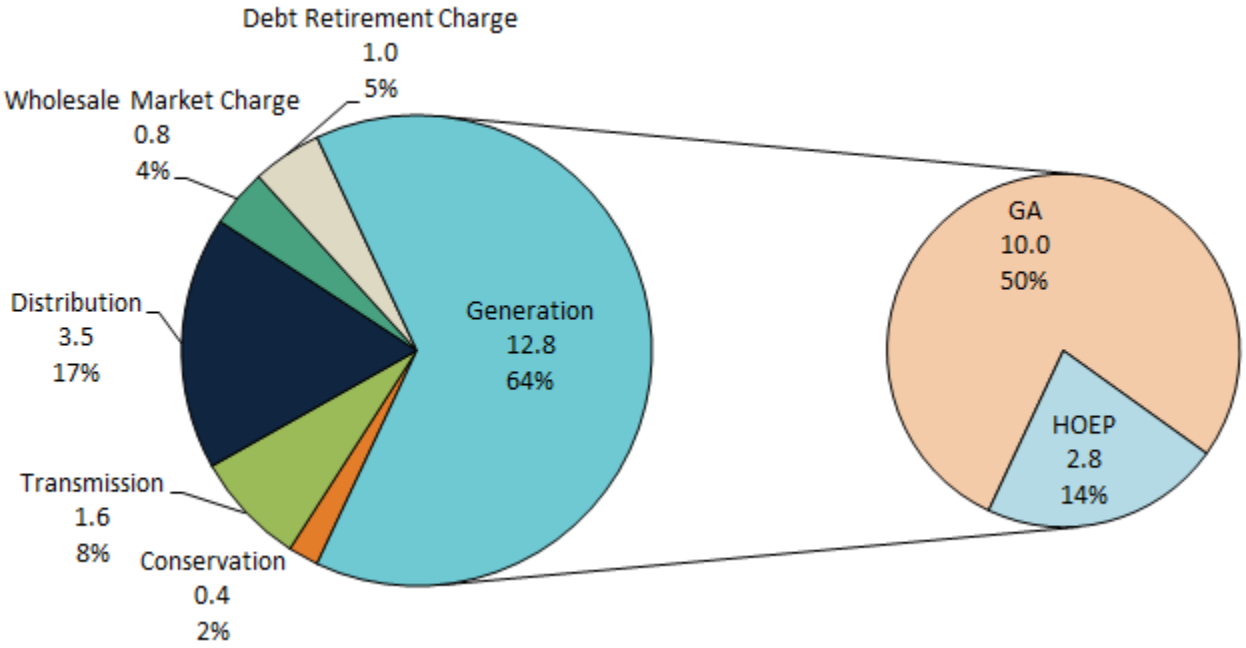
2. Ontario's Fair Hydro Plan – Providing Relief for Consumers

3. Questions

Ontario's Electricity Market

- In 2015, generation accounted for 64% of total electricity system costs. Total system costs in 2015 were $20 billion.

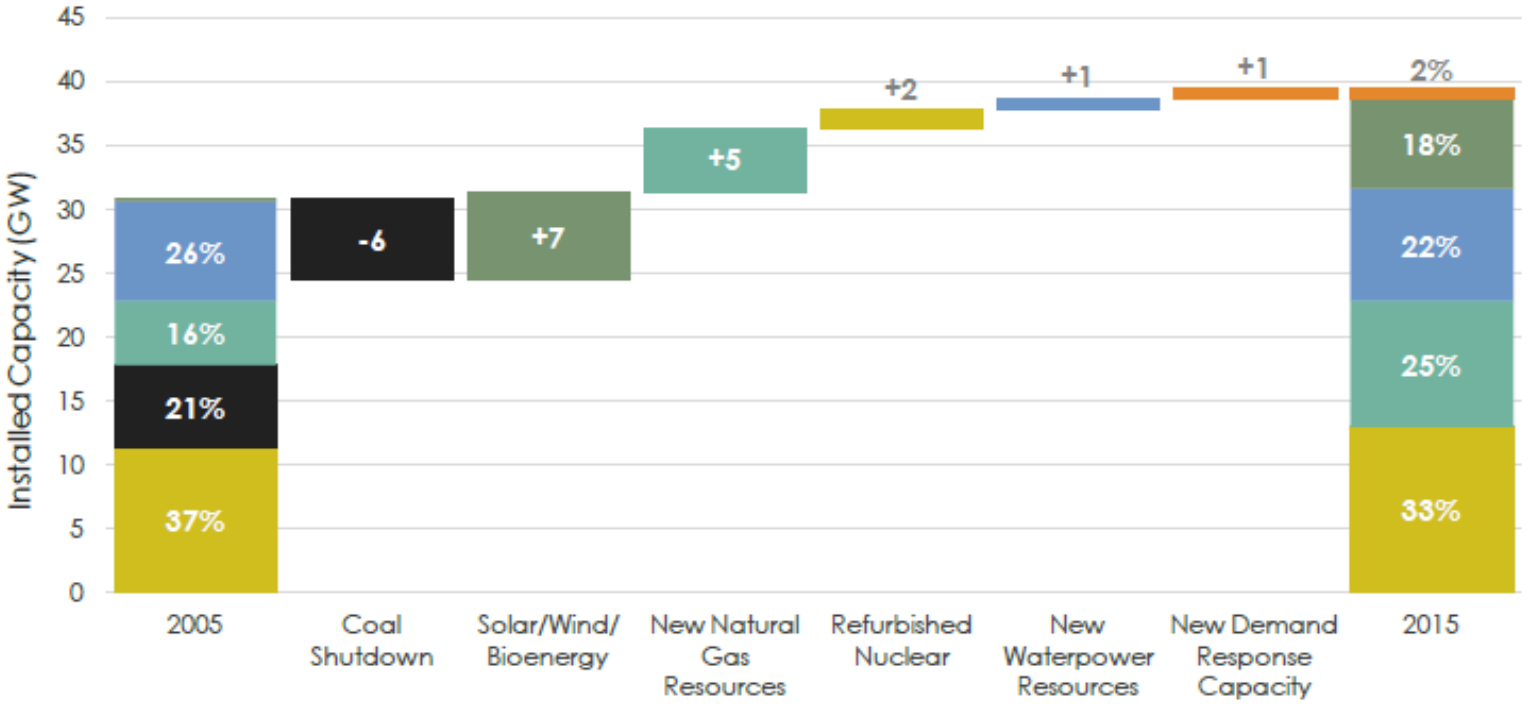
2015 Electricity System Cost
$ billion



Source: IESO

Significant Change in Supply Mix

- Between 2005 and 2015, government invested more than $50 billion in the electricity system, including $35 billion in electricity generation to restore reliability, replace coal and meet environmental objectives.
  - Electricity costs are increasing as necessary investments are made to decarbonize and modernize the province's electricity infrastructure.



Source: *IESO*

Electricity Prices Have Increased

- Since 2010, electricity prices have increased at a rate higher than the Consumer Price Index (CPI).

Typical Residential Electricity Bills
in $ per month, 750 kWh consumption

Source: *Ministry of Energy*

Recent Actions To Mitigate Electricity Rates

- Following the 2016 Throne Speech, several actions were announced to further reduce electricity costs.
  - As of January 1, 2017, Ontario is rebating an amount equal to the provincial portion of the HST to reduce eligible residential, small business and farm electricity bills by 8%.
  - Expanded support available to eligible rural ratepayers by updating Rural or Remote Rate Protection (RRRP) with additional relief, decreasing total electricity bills by an average of $45 each month when combined with the 8% rebate.
  - Expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants.
  - Suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.
  - Limiting the Feed-In Tariff (FIT) 5 procurement target to 150 MW and suspending future FIT procurements – up to $129 million in cost savings.

Ontario’s Fair Hydro Plan

Ontario's Fair Hydro Plan

- Ontario is lowering electricity bills by 25 per cent for the typical residential customer and holding rate increases to the rate of inflation for four years. Small businesses and farms would also benefit from this initiative.

- People with low incomes, those served by local distribution companies (LDCs) with the highest distribution costs, OESP recipients and On-Reserve First Nation households would benefit from even greater reductions to their electricity bills.

- These new measures will cost the government up to $2.5 billion over the next three years.

- Government intends to introduce legislation to enable Ontario's Fair Hydro Plan.

1. Refinancing Global Adjustment

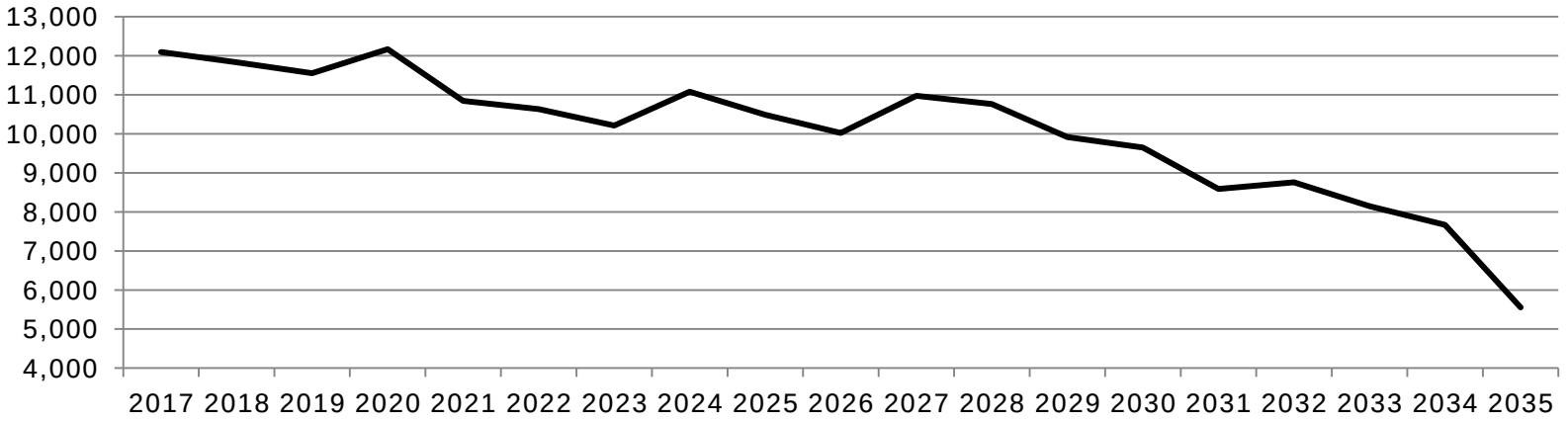
Refinancing the Global Adjustment

- Refinancing the Global Adjustment (GA) would provide significant and immediate rate relief by spreading the cost of electricity investments over a longer period of time.
  - 25% reduction on average for the typical residential customer and rates would follow inflation for the next 4 years.

- Under current forecasts, the immediate reduction (i.e., the financed portion) in the GA would be about $2.5 billion per year on average over the first ten years, with a maximum annual interest cost of $1.4 billion.

- This measure would share the associated costs more fairly. The chart below shows how Global Adjustment (GA) cost is front-end loaded and forecast to decline over time.

Forecast Global Adjustment Cost (nominal $ million)



Source: IESO

Policy Rationale

- The majority of the province's electricity generators are under 20-year contracts. Many of these generators will be able to operate past their contract term.

- By recognizing that generation assets are expected to continue to provide benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.

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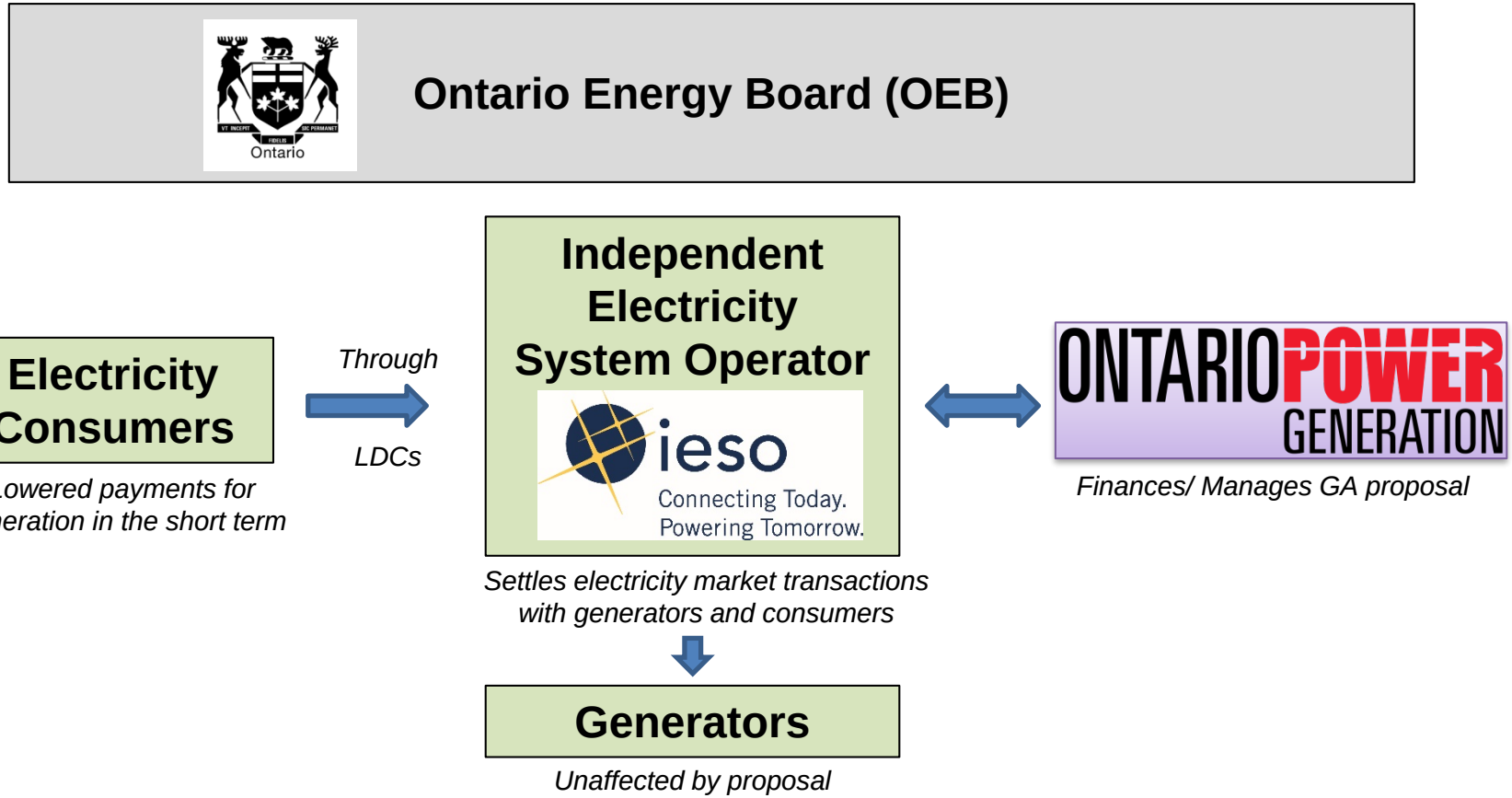

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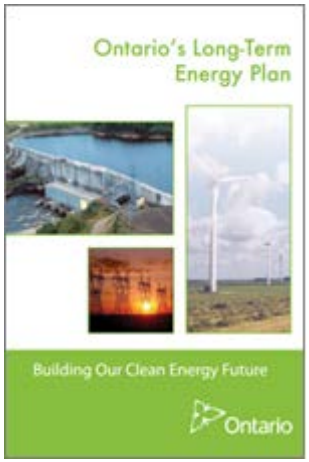

From:	Gadi Mayman
To:	Ronald Kwan; Mike Manning; Ken Kandeepan
Cc:	Anna Strathy; Gavin He
Subject:	Fwd: Rate Mitigation Implementation Meeting - April 6, 2017
Date:	Thursday, April 06, 2017 8:08:38 PM
Attachments:	Action Items - April 6.docx ATT00001.htm

Begin forwarded message:

From: "Katona, Keley (ENERGY)" <Keley.Katona@ontario.ca>
Date: April 6, 2017 at 6:24:56 PM EDT
To: "Hume, Steen (ENERGY)" <Steen.Hume@ontario.ca>, "Sermat-Harding, Kaili (ENERGY)" <Kaili.Sermat-Harding@ontario.ca>, "Reid, Michael (ENERGY)" <Michael.Reid@ontario.ca>, "Calwell, Carolyn (ENERGY/MEDEI/MRI)" <Carolyn.Calwell@ontario.ca>, "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>, "'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com)" <jeffrey.lyash@opg.com>, "HARTWICK Ken - FINANCE (ken.hartwick@opg.com)" <ken.hartwick@opg.com>, Rosemaire Leclair <rosemarie.leclair@ontarioenergyboard.ca>, "Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca)" <maryanne.aldred@ontarioenergyboard.ca>, "Campbell, Bruce (bruce.campbell@ieso.ca)" <bruce.campbell@ieso.ca>, "Kim Marshall (Kim.Marshall@ieso.ca)" <Kim.Marshall@ieso.ca>, "Thompson, Scott (MOF)" <Scott.Thompson@ontario.ca>, "Angus, Helen (TBS)" <Helen.Angus@ontario.ca>, "Davidson, Steven (CAB)" <Steven.Davidson@ontario.ca>, 'Martine Band' <Martine.Band@ontarioenergyboard.ca>, 'CROZZOLI Carlo - CBUSDEV&STRT' <carlo.crozzoli@opg.com>, "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "LEE John -TREASURY" <john.s.lee@opg.com>
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Sent: April-05-17 5:10 PM

To: Hume, Steen (ENERGY); Sermat-Harding, Kaili (ENERGY); Reid, Michael (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF); 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com); HARTWICK Ken -FINANCE (ken.hartwick@opg.com); Rosemaire Leclair; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca); Campbell, Bruce (bruce.campbell@ieso.ca); Kim Marshall (Kim.Marshall@ieso.ca); Thompson, Scott (MOF); Angus, Helen (TBS); Davidson, Steven (CAB); 'Martine Band'; 'CROZZOLI Carlo -CBUSDEV&STRT'; Mayman, Gadi (OFA); LEE John -TREASURY
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Good evening,

Please find attached material for tomorrow's meeting.

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Global Adjustment Refinancing

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- SNAP working with CSD / TBS on allocation for each program (RRRP, OESP, FN Rate and OREC) without executive control on each
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ICI

- ESP / Comms continue to work with chamber of commerce / CME on outreach campaigns to business communities

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Other Items

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To:	Ken Kandeepan; Ronald Kwan; Mike Manning
Cc:	Christina Zhang; Gavin He
Subject:	Globe and Mail article from Ivey on intellectual rationale for GA smoothing
Date:	Tuesday, February 28, 2017 9:46:43 AM

You might find this interesting if you haven't seen it. Ron, this is the article that was being referred to at our 8am meeting.

https://app.infomart.com/newsletter/view-article/3722/4303/0/fold%7C13147%7C9978013

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From: Thom, Trevor
To: Mike Manning
Subject: Hi
Date: Wednesday, March 29, 2017 8:57:08 AM

Hi Mike,

When you have a moment, can you email me the attendees from your side for today's meeting. Thx.

Regards,

Trevor

Trevor Thom

Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor

Toronto, ON, Canada M5K 1A2

P: (416) 982-2788 | C: (647) 262-8584

trevor.thom@tdsecurities.com

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From: Olga Whiteley
To: Mike Manning
Cc: Anthony Martinello
Subject: IESO Financial Information Pursuant to Note Payable - 2016
Date: Friday, March 31, 2017 7:41:14 AM
Attachments: IESO_2016_Financials.pdf

Dear Mike,

As required by the April 1, 1999 Note Agreement between IESO and OEFC, please find attached a copy of IESO's 2016 audited financial statements.

Please let us know if you have any questions or concerns,

Best regards,

Olga.

Olga Whiteley, CFA | Treasury and Pension Operations

Independent Electricity System Operator (IESO) | T: (905) 403-6917 | F: (905) 403-6913

Station A, Box 4474, Toronto, ON M5W 4E5

Web: www.ieso.ca[ieso.ca] | Email: olga.whiteley@ieso.ca

2016 ANNUAL REPORT

Financial Statements

Table of Contents

1 Management Report

2 Independent Auditors' Report

3 Statement of Financial Position

4 Statement of Operations and Accumulated Surplus

5 Statement of Remeasurement Gains and Losses

6 Statement of Change in Net Debt

7 Statement of Cash Flows

8 Notes to Financial Statements

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Management Report

Management's Responsibility for Financial Reporting

The accompanying financial statements of the Independent Electricity System Operator are the responsibility of management and have been prepared in accordance with Canadian public sector accounting standards. The significant accounting policies followed by the Independent Electricity System Operator are described in the Summary of Significant Accounting Policies contained in Note 2 in the financial statements. The preparation of financial statements necessarily involves the use of estimates based on management's judgement, particularly when transactions affecting the current accounting period cannot be finalized with certainty until future periods. The financial statements have been prepared within reasonable limits of materiality and in light of information available up to March 22, 2017.

Management maintained a system of internal controls designed to provide reasonable assurance that the assets were safeguarded and that reliable information was available on a timely basis. The system included formal policies and procedures and an organizational structure that provided for the appropriate delegation of authority and segregation of responsibilities.

These financial statements have been examined by KPMG LLP, a firm of independent external auditors appointed by the Board of Directors. The external auditors' responsibility is to express their opinion on whether the financial statements are fairly presented in accordance with generally accepted accounting principles in Canada. The Auditors' Report, which follows, outlines the scope of their examination and their opinion.

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

On behalf of management,

Bruce Campbell
President and Chief Executive Officer
Toronto, Canada
March 22, 2017

Kimberly Marshall
Vice President, Corporate Services
and Chief Financial Officer
Toronto, Canada
March 22, 2017

Independent Auditors' Report

To the Board of Directors of the Independent Electricity System Operator (IESO)

We have audited the accompanying financial statements of IESO, which comprise the statement of financial position as at December 31, 2016, the statements of operations and accumulated deficit, remeasurement gains and losses, change in net debt and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of IESO as at December 31, 2016, and its results of operations and the changes in its net debt and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

March 22, 2017
Waterloo, Canada

Statement of Financial Position

As at (in thousands of Canadian dollars)	December 31, 2016	December 31, 2015
	$	(restated Note 3) $
FINANCIAL ASSETS		
Cash and cash equivalents	33,005	14,715
Accounts receivable	31,103	33,199
Regulated assets **(Note 3)**	65,064	88,202
Long-term investments **(Note 4)**	40,355	37,318
Market accounts – assets **(Note 3)**	1,636,201	1,443,121
TOTAL FINANCIAL ASSETS	**1,805,728**	**1,616,555**
LIABILITIES		
Accounts payable and accrued liabilities **(Note 5)**	38,963	48,868
Accrued interest on debt	315	315
Rebates due to market participants **(Note 6)**	12,551	9,595
Debt **(Note 7)**	90,000	90,000
Accrued pension liability **(Note 8)**	34,620	36,062
Accrued liability for employee future benefits other than pension **(Note 8)**	90,251	84,501
Market accounts – liabilities **(Note 3)**	1,636,201	1,443,121
TOTAL LIABILITIES	**1,902,901**	**1,712,462**
NET DEBT	(97,173)	(95,907)
NON-FINANCIAL ASSETS		
Net tangible capital assets **(Note 9)**	105,047	103,716
Prepaid expenses	6,614	6,197
TOTAL NON-FINANCIAL ASSETS	**111,661**	**109,913**
ACCUMULATED SURPLUS		
Accumulated surplus from operations **(Note 6)**	6,582	6,348
Accumulated remeasurement gains	7,906	7,658
ACCUMULATED SURPLUS	**14,488**	**14,006**

On behalf of the Board:

Tim O'Neill
Chair
Toronto, Canada

Carole Workman
Director
Toronto, Canada

Statement of Operations and Accumulated Surplus

For the year ended December 31 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual (restated Note 3) $
IESO CORE OPERATIONS			
System fees	177,219	185,531	186,187
Other revenue **(Note 10)**	1,000	2,531	5,377
Interest and investment income	–	2,157	1,430
Core operation revenues	**178,219**	**190,219**	**192,994**
Compensation and benefits	(106,361)	(105,570)	(104,994)
Professional and consulting	(20,118)	(16,844)	(21,461)
Operating and administration	(33,502)	(34,336)	(35,005)
Core operating expenses	**(159,981)**	**(156,750)**	**(161,460)**
Amortization	(17,500)	(19,577)	(17,933)
Interest	(738)	(1,341)	(1,610)
Core expenses	**(178,219)**	**(177,668)**	**(181,003)**
Core operations annual surplus before rebates	**–**	**12,551**	**11,991**
Rebates due to market participants	–	(12,551)	(9,595)
Core operations annual surplus	**–**	**–**	**2,396**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	4,341	3,889	6,021
Compensation and benefits	(2,981)	(2,180)	(3,094)
Professional and consulting	(1,515)	(770)	(1,351)
Operating and administration	(150)	(705)	(114)
Customer education and market enforcement expenses	**(4,646)**	**(3,655)**	**(4,559)**
Market sanctions and payment adjustments annual surplus/(deficit)	**(305)**	**234**	**1,462**
SMART METERING ENTITY			
Smart metering charge	32,244	27,426	26,185
Compensation and benefits	(3,567)	(2,661)	(2,607)
Professional and consulting	(18,763)	(14,659)	(14,902)
Operating and administration	(2,364)	(5,705)	(4,200)
Smart metering operating expenses	**(24,694)**	**(23,025)**	**(21,709)**
Amortization	(4,491)	(3,861)	(3,524)
Interest	(3,059)	(540)	(952)
Smart metering expenses	**(32,244)**	**(27,426)**	**(26,185)**
Smart metering entity annual surplus	**–**	**–**	**–**
ANNUAL SURPLUS/(DEFICIT)	**(305)**	**234**	**3,858**
ACCUMULATED SURPLUS FROM OPERATIONS, BEGINNING OF PERIOD	6,348	6,348	2,490
ACCUMULATED SURPLUS FROM OPERATIONS, END OF PERIOD	**6,043**	**6,582**	**6,348**

Statement of Remeasurement Gains and Losses

For the year ended December 31 (in thousands of Canadian dollars)	2016	2015
	Actual $	Actual (restated Note 3) $
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	**7,658**	**6,362**
UNREALIZED GAINS ATTRIBUTABLE TO:		
Foreign exchange – other	477	515
Portfolio investments **(Note 4)**	286	1,372
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange – other	(515)	(591)
NET REMEASUREMENT GAINS FOR THE PERIOD	**248**	**1,296**
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	**7,906**	**7,658**

Statement of Change in Net Debt

For the year ended December 31 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual (restated Note 3) $
ANNUAL SURPLUS/(DEFICIT)	**(305)**	**234**	**3,858**
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(30,706)	(24,769)	(25,624)
Amortization of tangible capital assets	21,991	23,438	21,457
Change in prepaid expenses	–	(417)	(27)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	**(8,715)**	**(1,748)**	**(4,194)**
NET REMEASUREMENT GAINS FOR THE PERIOD	–	248	1,296
CHANGE IN NET DEBT	**(9,020)**	**(1,266)**	**960**
NET DEBT, BEGINNING OF PERIOD	(95,907)	(95,907)	(96,867)
NET DEBT, END OF PERIOD	**(104,927)**	**(97,173)**	**(95,907)**

Statement of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)	2016	2015
	$	(restated Note 3) $
OPERATING TRANSACTIONS		
Change in accumulated surplus:		
Annual surplus	234	3,858
	234	3,858
Changes in non-cash items:		
Amortization	23,438	21,457
Pension expense	11,610	11,970
Other employee future benefits expense	8,127	6,901
	43,175	40,328
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(7,495)	(775)
Change in accounts receivable	2,096	(10,145)
Change in rebates due to market participants	2,956	9,595
Change in regulated assets	23,138	23,942
Change in prepaid expenses	(417)	(27)
	20,278	22,590
Other:		
Contribution to pension fund	(13,052)	(12,851)
Payment of employee future benefits	(2,377)	(2,314)
	(15,429)	(15,165)
Cash provided by operating transactions	**48,258**	**51,611**
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(24,769)	(25,624)
Change in accounts payable and accrued liabilities	(2,410)	(1,569)
Cash applied to capital transactions	**(27,179)**	**(27,193)**
INVESTING TRANSACTIONS		
Purchase of long-term investments	(2,751)	(1,967)
Cash applied to investing transactions	**(2,751)**	**(1,967)**
FINANCING TRANSACTIONS		
Debt repayment	–	(39,000)
Cash applied to financing transactions	**–**	**(39,000)**
INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	**18,328**	**(16,549)**
CASH AND CASH EQUIVALENTS – BEGINNING OF PERIOD	14,715	31,340
Unrealized foreign exchange losses for the period	(38)	(76)
CASH AND CASH EQUIVALENTS – END OF PERIOD	**33,005**	**14,715**

Notes to Financial Statements

1. NATURE OF OPERATIONS

a) The Independent Electricity System Operator (IESO) is a not-for-profit, non-taxable, corporation established pursuant to Part II of the *Electricity Act, 1998*. The predecessor Independent Electricity System Operator and the Ontario Power Authority (OPA) were amalgamated by statute effective on January 1, 2015, and continued as the Independent Electricity System Operator. As set out in the *Electricity Act, 1998*, the IESO operates pursuant to a licence granted by the Ontario Energy Board (OEB). The amalgamation was effected pursuant to Bill 14, *Building Opportunity and Securing Our Future Act (Budget Measures), 2014*, which received Royal Assent on July 24, 2014. Schedule 7 of the Bill amended the *Electricity Act, 1998*, by amalgamating the two predecessor corporations and by continuing them as the Independent Electricity System Operator. The transitional provision, dealing with corporate matters, provides, among other things, that the predecessor IESO and OPA cease to exist as entities separate from the amalgamated IESO and all their rights, properties and assets become the rights, properties and assets of the amalgamated IESO, as do all outstanding debts, liabilities and obligations of the predecessor IESO and OPA. Schedule 7 of Bill 14 came into force on January 1, 2015. The objects of the IESO as contained in the *Electricity Act, 1998*, and Ontario Regulation 288/14 are as follows:

- to exercise the powers and perform the duties assigned to it under this Act, the regulations, directions, the market rules and its licence;
- to enter into agreements with transmitters to give it authority to direct the operation of their transmission systems;
- to direct the operation and maintain the reliability of the IESO-controlled grid to promote the purposes of this Act;
- to participate in the development by any standards authority of criteria and standards relating to the reliability of the integrated power system;
- to establish and enforce criteria and standards relating to the reliability of the integrated power system;
- to work with the responsible authorities outside of Ontario to co-ordinate the IESO's activities with the activities of those authorities;
- to operate the IESO-administered markets to promote the purposes of this Act;
- to engage in activities related to contracting for the procurement of electricity supply, electricity capacity and conservation resources;
- to engage in activities related to settlements, payments under a contract entered into under the authority of this Act and payments provided for under this Act or the *Ontario Energy Board Act, 1998*;
- to engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario;
- to forecast electricity demand and the adequacy and reliability of electricity resources for Ontario for the short term, medium term and long term;
- to conduct independent planning for electricity generation, demand management, conservation and transmission;
- to engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources;
- to engage in activities in support of system-wide goals for the amount of electricity to be produced from different energy sources;
- to engage in activities that facilitate load management;
- to engage in activities that promote electricity conservation and the efficient use of electricity;
- to assist the Board by facilitating stability in rates for certain types of consumers;
- to collect and make public information relating to the short-term, medium-term and long-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs; and
- to engage in such other objects as may be prescribed by the regulations.

b) The IESO was designated the Smart Metering Entity (SME) by Ontario Regulation 393/07 under the *Electricity Act, 1998*, on March 28, 2007. The regulation came into effect on July 26, 2007.

The objects of the Smart Metering Entity, as contained in the *Electricity Act, 1998*, are as follows:

- to plan and implement and, on an ongoing basis, oversee, administer and deliver any part of the smart metering initiative as required by regulation under this or any Act or directive made pursuant to sections 28.3 or 28.4 of the *Ontario Energy Board Act, 1998*, and, if so authorized, to have the exclusive authority to conduct these activities;
- to collect and manage and to facilitate the collection and management of information and data and to store the information and data related to the metering of consumers' consumption or use of electricity in Ontario, including data collected from distributors and, if so authorized, to have the exclusive authority to collect, manage and store the data;
- to establish, to own or lease and to operate one or more databases to facilitate collecting, managing, storing and retrieving smart metering data;
- to provide and promote non-discriminatory access, on appropriate terms and subject to any conditions in its licence relating to the protection of privacy, by distributors, retailers and other persons,
    i. to the information and data referred to above, and
    ii. to the telecommunication system that permits the Smart Metering Entity to transfer data about the consumption or use of electricity to and from its databases, including access to its telecommunication equipment, systems and technology and associated equipment, systems and technologies;
- to own or to lease and to operate equipment, systems and technology, including telecommunication equipment, systems and technology that permit the Smart Metering Entity to transfer data about the consumption or use of electricity to and from its databases, including owning, leasing or operating such equipment, systems and technology and associated equipment, systems and technologies, directly or indirectly, including through one or more subsidiaries, if the Smart Metering Entity is a corporation;
- to engage in such competitive procurement activities as are necessary to fulfill its objects or business activities;
- to procure, as and when necessary, meters, metering equipment, systems and technology and any associated equipment, systems and technologies on behalf of distributors, as an agent or otherwise, directly or indirectly, including through one or more subsidiaries, if the Smart Metering Entity is a corporation;
- to recover, through just and reasonable rates, the costs and an appropriate return approved by the Ontario Energy Board associated with the conduct of its activities; and
- to undertake any other objects that are prescribed by associated regulation.

c) The IESO is required to submit its proposed expenditures, revenue requirements and fees for the coming year to the OEB for review and approval. The submission may be made only with the approval or deemed approval of the IESO business plan by the Minister of Energy (Minister).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) Basis of financial statement preparation

The accompanying financial statements have been prepared on a going concern basis and in accordance with Canadian public sector accounting standards (PSAB) and reflect the following significant accounting policies.

b) Revenue recognition

System fees earned by the IESO are based on approved rates for each megawatt of electricity withdrawn from the IESO-controlled grid (including scheduled exports) and embedded generation. System fees are recognized as revenue at the time the electricity is withdrawn. Rebates are recognized in the year in which the regulatory deferral account, before such rebates, exceeds regulated limits.

For 2015, the system fee for the then newly amalgamated IESO was comprised of the combined rate calculations of the respective pre-amalgamation entities. Specifically, the former IESO rate base was calculated on electricity withdrawn from the IESO-controlled grid (including scheduled exports and embedded generation), whereas the former OPA rate base only considered Ontario electricity consumers. The OEB approved the continued use of this combined rate calculation for 2016 in an interim order issued on December 22, 2015.

These financial statements do not include the revenue and expenses of the financial transactions of market participants within the IESO-administered markets (IAM).

Other revenue represents amounts that accrue to the IESO relating to investment income on funds passing through market settlement accounts, as well as application fees. Such revenue is recognized as it is earned.

Interest and investment income represents realized interest income and investment gains or losses on cash, cash equivalents, short-term investments and long-term investments.

Market sanctions represent funds received to offset payments disbursed related to penalties, damages, fines and payment adjustments arising from resolved settlement disputes.

c) Financial instruments

The IESO records cash and cash equivalents, investment portfolio and foreign currency exchange forward contracts at fair value. The cumulative change in fair value of these financial instruments is recorded in accumulated surplus as remeasurement gains and losses and is included in the value of the respective financial instrument shown in the statement of financial position and the statement of remeasurement gains and losses. Upon disposition of the financial instruments, the cumulative remeasurement gains and losses are reclassified to the statement of operations and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations. Transaction costs are charged to operations as incurred.

Cash and cash equivalents comprise cash, term deposits and other short-term, highly rated investments with original maturity dates of less than 90 days.

The IESO records accounts receivable, accounts payable and debt at amortized cost.

d) Regulated assets and liabilities

As a rate-regulated entity, the IESO, in appropriate circumstances establishes regulated assets or liabilities and thereby defers the impact on the statement of operations of certain expenses or revenues because they are probable to be collected or refunded to market participants through future billings. The IESO has applied guidance from United States Generally Accepted Accounting Principles (US GAAP) Topic 980, *Regulated Operations*, in this policy.

e) Market accounts – assets and liabilities

The IESO records the market accounts assets, liabilities and amounts due to and from market participants held on behalf of the IESO-administered markets in its statements of financial position. The IESO-administered markets is a balancing system, and as such, the net position of market accounts will settle to a $nil balance in accordance with market rules.

f) Tangible capital assets

Tangible capital assets are recorded at cost, which includes all amounts directly attributable to the acquisition, construction, development or betterment of the asset. The IESO capitalizes applicable interest as part of the cost of tangible capital assets.

g) Assets under construction

Assets under construction generally relates to the costs of physical facilities, hardware and software, and includes costs paid to vendors, internal and external labour, consultants and interest related to funds borrowed to finance the project. Costs relating to assets under construction are transferred to tangible capital assets when the asset under construction is deemed to be ready for use.

h) Amortization

The capital cost of tangible capital assets in service is amortized on a straight-line basis over their estimated service lives.

The estimated service lives in years, from the date the assets were acquired, are:

Class	Estimated Average Service Life 2016	Estimated Average Service Life 2015
Facilities	37	37
Market systems and applications	4 to 12	4 to 12
Infrastructure and other assets	4 to 10	4 to 7
Meter data management/repository	10	10

Gains and losses on sales or premature retirements of tangible capital assets are charged to operations.

The estimated service lives of tangible capital assets are subject to periodic review. The effects of changes in the estimated lives are amortized on a prospective basis. The most recent review was completed in fiscal 2016.

i) Pension, other post-employment benefits and compensated absences

The IESO's post-employment benefit programs include pension, group life insurance, health care, long-term disability and workers' compensation benefits.

The IESO accrues obligations under pension and other post-employment benefit (OPEB) plans and the related costs, net of plan assets. Pension and OPEB expenses and obligations are determined annually by independent actuaries using the projected benefit method and management's best estimate of expected return on plan assets, salary escalation, retirement ages of employees, mortality and expected health-care costs. The discount rate used to value liabilities is based on the expected rate of return on plan assets as at the measurement date of September 30.

The expected return on plan assets is based on management's long-term best estimate using a market-related value of plan assets. The market-related value of plan assets is determined using the average value of assets over three years as at the measurement date of September 30.

Pension and OPEB expenses are recorded during the year in which employees render services. Pension and OPEB expenses consist of current service costs, interest expense on liabilities, expected return on plan assets and the cost of plan amendments in the period. Actuarial gains/(losses) arise from, among other things, the difference between the actual rate of return on plan assets for a period and the expected long-term rate of return on plan assets for that period or from changes in actuarial assumptions used to determine the accrued benefit obligations. Actuarial gains/(losses) are amortized over the expected average remaining service life of the employees covered by the plan.

The expected average remaining service life of employees covered by the pension plans is 15 years (2015 – 15 years) and OPEB plan is 16.2 years (2015 – 14.7 years).

The IESO sick pay benefits accumulate but do not vest. The IESO accrues sick pay benefits based on the expectation of future utilization and records the accrual within accounts payable and accrued liabilities.

j) Foreign currency exchange

Transactions denominated in foreign currencies are translated into Canadian dollars at the rate of exchange prevailing on the date of the transaction. Items on the statement of financial position denominated in foreign currency are translated to Canadian dollars at the rate of exchange as of the financial statements date. The cumulative unrealized foreign currency exchange gains and losses of items continuing to be recognized on the statement of financial position are recorded in accumulated deficit as remeasurement gains and losses and shown in the statement of financial position and the statement of remeasurement gains and losses. Upon settlement of the item denominated in a foreign currency, the cumulative remeasurement gains and losses are reclassified to the statement of operations, and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations.

k) Use of estimates

The preparation of the financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent assets and liabilities as at the date of the financial statements. The IESO's accounts that involve a greater degree of uncertainty include the carrying values of tangible capital assets, accrued pension liability and accrual for employee future benefits other than pensions. Actual results could differ from those estimates.

3. NEW ACCOUNTING POLICIES

As of January 1, 2016, the IESO changed its accounting policy regarding the recognition of assets and liabilities subject to rate regulation. The change was made to better reflect the economic substance of certain types of expenses that may not be directly recovered through the normal revenue requirement model. This change has been applied retroactively and has increased amounts previously unrecorded for regulatory assets and decreased amounts previously reported for accumulated deficit.

The IESO recognizes two regulated assets: 1) unrecovered smart metering expenses and 2) unrecovered PSAB transition items.

The smart metering expenses result from the IESO's role as the Smart Metering Entity. As such, the IESO funds its SME operating costs and capital investment in the meter data management/repository (MDM/R) through fees from users of smart meters in Ontario. The OEB approves the Smart Metering Entity charge and the charge is intended to cover the costs of developing and operating the MDM/R.

The unrecovered PSAB transition items result from the IESO's adoption of Canadian public sector accounting standards effective January 1, 2011. The adoption of PSAB was accounted for by retroactive application with restatement of prior periods subject to the requirements in Section PS 2125, *First-time Adoption by Government Organizations*. The corresponding change to pension and other post-employment benefits resulted in previously unrecognized actuarial losses and past service costs of $80,617 thousand at the date of transition.

Regulated assets consist of the following:

As of December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Unrecovered smart metering expenses	21,623	40,849
Unrecovered PSAB transition items	43,441	47,353
Closing balance	**65,064**	**88,202**

In addition, as of January 1, 2016, the IESO changed its accounting policy regarding the recognition of market accounts assets and liabilities on the statement of financial position. The change was made to better reflect the assets and liabilities and amounts due to and from market participants held by the IESO on behalf of the IAM at year end. This change has been applied retroactively and has increased amounts previously unrecorded for market accounts assets and liabilities. There is no impact to the accumulated deficit or revenues and expenses as the IESO is not party to these transactions as per the market rules.

Components of the market accounts are as follows:

As of December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Cash, restricted for market activities	244,755	271,574
Amounts due from market participants	1,391,260	1,171,389
Interest receivable	186	158
Revolving line of credit	(150,501)	(12,739)
HST receivable	25,531	20,247
Amounts due to market participants	(1,392,643)	(1,380,086)
Other liabilities	(118,588)	(70,543)
Closing balance	**–**	**–**

Comparative figures

A detailed reconciliation of the IESO's restated statement of financial position as at December 31, 2015, as follows:

As of (in thousands of Canadian dollars)	December 31, 2015 (as reported) $	December 31, 2015 adjustments $	December 31, 2015 (as restated) $
FINANCIAL ASSETS			
Cash and cash equivalents	14,715	–	14,715
Accounts receivable	33,199	–	33,199
Long-term investments	37,318	–	37,318
Regulated assets	–	88,202	88,202
Market accounts – assets	–	1,443,121	1,443,121
TOTAL FINANCIAL ASSETS	**85,232**	**1,531,323**	**1,616,555**
LIABILITIES			
Accounts payable and accrued liabilities	48,868	–	48,868
Accrued interest on debt	315	–	315
Rebates due to market participants	9,595	–	9,595
Debt	90,000	–	90,000
Accrued pension liability	36,062	–	36,062
Accrued liability for employee future benefits other than pension	84,501	–	84,501
Market accounts – liabilities	–	1,443,121	1,443,121
TOTAL LIABILITIES	**269,341**	**1,443,121**	**1,712,462**
NET DEBT	**(184,109)**	**88,202**	**(95,907)**
NON-FINANCIAL ASSETS			
Net tangible capital assets	103,716	–	103,716
Prepaid expenses	6,197	–	6,197
TOTAL NON-FINANCIAL ASSETS	**109,913**	**–**	**109,913**
ACCUMULATED SURPLUS/(DEFICIT)			
Accumulated surplus/(deficit) from operations	(81,854)	88,202	6,348
Accumulated remeasurement gains	7,658	–	7,658
ACCUMULATED SURPLUS/(DEFICIT)	**(74,196)**	**88,202**	**14,006**

A detailed reconciliation of the IESO's restated statement of operations for the year ended December 31, 2015, is as follows:

For the year ended (in thousands of Canadian dollars)	December 31, 2015 (as reported) $	December 31, 2015 adjustments $	December 31, 2015 (as restated) $
IESO CORE OPERATIONS			
System fees	190,099	(3,912)	186,187
Other revenue	5,377	–	5,377
Interest and investment income	1,430	–	1,430
Core operations revenues	**196,906**	**(3,912)**	**192,994**
Compensation and benefits	(104,994)	–	(104.994)
Professional and consulting	(21,461)	–	(21,461)
Operating and administration	(35,005)	–	(35,005)
Core operating expenses	**(161,460)**	**–**	**(161,460)**
Amortization	(17,933)	–	(17,933)
Interest	(1,610)	–	(1,610)
Core expenses	**(181,003)**	**–**	**(181,003)**
Core operations annual surplus before rebates	**15,903**	**(3,912)**	**11,991**
Rebates due to market participants	(9,595)	–	(9,595)
Core operations annual surplus	**6,308**	**(3,912)**	**2,396**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustment	6,021	–	6,021
Compensation and benefits	(3,094)	–	(3,094)
Professional and consulting	(1,351)	–	(1,351)
Operating and administrative	(114)	–	(114)
Customer education and market enforcement expenses	**(4,559)**	**–**	**(4,559)**
Market sanctions and payment adjustments annual surplus	**1,462**	**–**	**1,462**
SMART METERING ENTITY			
Smart metering charge	**46,215**	**(20,030)**	**26,185**
Compensation and benefits	(2,607)	–	(2,607)
Professional and consulting	(14,902)	–	(14,902)
Operating and administration	(4,200)	–	(4,200)
Smart metering operating expenses	**(21,709)**	**–**	**(21,709)**
Amortization	(3,524)	–	(3,524)
Interest	(952)	–	(952)
Smart metering expenses	**(26,185)**	**–**	**(26,185)**
Smart metering entity annual surplus	**20,030**	**(20,030)**	**–**
ANNUAL SURPLUS	**27,800**	**(23,942)**	**3,858**
ACCUMULATED SURPLUS/(DEFICIT) FROM OPERATIONS, BEGINNING OF PERIOD	(109,654)	112,144	2,490
ACCUMULATED SURPLUS/(DEFICIT) FROM OPERATIONS, END OF PERIOD	**(81,854)**	**88,202**	**6,348**

4. LONG-TERM INVESTMENTS

Long-term investments in a balanced portfolio of pooled funds are valued by the pooled funds manager based on published price quotations and amount to $39,972 thousand (2015 – $37,019 thousand). As at December 31, the market value allocation of these long-term investments was 62.3% equity securities and 37.7% debt securities (2015 – 56.0% and 44.0% respectively).

Balanced portfolio of pooled funds

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Opening balance	37,019	33,758
Net purchase of investments	2,667	1,889
Change in fair value	286	1,372
Closing balance	**39,972**	**37,019**

In addition to the balanced portfolio of pooled funds, the IESO has a long-term deposit with Canada Revenue Agency in the amount of $383 thousand (2015 – $299 thousand) pertaining to the Retirement Compensation Arrangements Trust (Note 7).

5. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Relating to operations	35,630	43,125
Relating to tangible capital assets	3,333	5,743
Closing balance	**38,963**	**48,868**

6. REBATES DUE TO MARKET PARTICIPANTS AND ACCUMULATED SURPLUS

In 2016, the IESO recognized $12,551 thousand in rebates due to market participants of system fees (2015 – $9,595). As at December 31, 2016, rebates due to market participants were $22,146 thousand, with the 2015 portion of $9,595 thousand rebated in January 2017.

The IESO's approved regulatory deferral account balance has been historically maintained at a maximum of $10.0 million. The 2016 approved regulatory deferral account balance at $10.0 million was approved by the OEB on December 1, 2016.

Prior to 2014, unrealized gains and losses from portfolio investments and foreign exchange were included in the balance of the regulatory deferral account (life-to-date total $4,144 thousand). As of January 1, 2014, only realized gains and losses are included in this balance.

As at December 31, the components of the accumulated surplus were as follows:

Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Regulatory deferral account (a)	10,000	10,000
Accumulated market sanctions and payment adjustments (b)	726	492
Remeasurement gains	3,762	3,514
Accumulated surplus – end of year	**14,488**	**14,006**

a) Regulatory Deferral Account

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Accumulated surplus – beginning of year	10,000	7,604
Revenues (before rebates due to market participants)	190,219	192,994
Rebates due to market participants	(12,551)	(9,595)
Core operation expenses	(177,668)	(181,003)
Accumulated surplus – end of year	**10,000**	**10,000**

b) Accumulated Market Sanctions and Payment Adjustments

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Accumulated surplus/(deficit) – beginning of year	492	(970)
Market sanctions and payment adjustments	3,889	6,021
Customer education and market enforcement expenses	(3,655)	(4,559)
Accumulated surplus – end of year	**726**	**492**

7. DEBT

Note payable to Ontario Electricity Financial Corporation (OEFC)

In April 2014, the IESO entered into a three-year note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 2.046% per annum and is repayable in full on April 30, 2017. Interest accrues daily and is payable in arrears semi-annually in April and October of each year. As at December 31, 2016, the note payable to the OEFC was $90.0 million (December 31, 2015 – $90.0 million).

For the year ended December 31, 2016, the interest expense on the note payable was $1,841 thousand (2015 – $1,841 thousand).

Credit facility

The IESO has an unsecured credit facility agreement with the OEFC, which will make available to the IESO an amount up to $95.0 million. Advances are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing for a 30-day term plus 0.50% per annum, with draws, repayments and interest payments due monthly. The credit facility expires April 30, 2017. As at December 31, 2016, no amount was drawn on the credit facility (December 31, 2015 – $nil).

For the year ended December 31, 2016, the interest expense on the credit facility was $nil (2015 – $279 thousand).

Retirement Compensation Arrangements Trust

In July 2013, the IESO established a Retirement Compensation Arrangements (RCA) Trust to provide security for the IESO's obligations under the terms of the supplemental employee retirement plan for its employees. As at December 31, 2016, the IESO has provided the RCA trustee with a bank letter of credit of $30,466 thousand (2015 – $28,408 thousand) the trustee can draw on if the IESO is in default under the terms of this plan.

8. POST-EMPLOYMENT BENEFIT PLANS

The IESO provides pension and other employee post-employment benefits, comprising group life insurance, long-term disability and group medical and dental plans, for the benefit of current and retired employees.

Pension plans

The IESO provides a contributory defined benefit, indexed, registered pension plan. In addition to the funded, registered pension plan, the IESO provides certain non-registered defined benefit pensions through an unfunded, indexed, non-registered plan.

Other employee future benefits

The group life insurance, long-term disability and group medical and dental benefits are provided through unfunded, non-registered defined benefit plans.

Summary of accrued benefit obligations and plan assets

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Accrued benefit obligation	507,724	482,994	91,014	83,455
Fair value of plan assets	523,756	475,714	–	–
Funded status as of measurement date	16,032	(7,280)	(91,014)	(83,455)
Employer contribution/other benefits payments after measurement date	2,416	427	588	582
Unrecognized actuarial (gain)/loss	(53,068)	(29,209)	175	(1,628)
Accrued liability recognized in the statement of financial position	**(34,620)**	**(36,062)**	**(90,251)**	**(84,501)**

Registered pension plan assets

As at the measurement date of September 30, the proportion of the fair value of registered pension plan assets held in each asset class was as follows:

	2016	2015
Canadian equity securities	20.2%	19.9%
Foreign equity securities	39.9%	41.8%
Canadian debt securities	39.8%	39.0%
Cash equivalents	0.4%	0.6%
Forward foreign exchange contracts	(0.3%)	(1.3%)
	100.0%	**100.0%**

Principal assumptions used to calculate benefit obligations at the end of the year are determined at that time and are as follows:

	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
Discount rate at the end of the period	5.75%	6.00%	5.75%	6.00%
Rate of compensation increase	3.50%	3.75%	3.50%	3.75%
Rate of indexing	2.00%	2.25%	2.00%	2.25%

The assumed prescription drug inflation was 8.00% for 2016, grading down to an ultimate rate 4.50% per year in 2030. Dental costs are assumed to increase by 4.00% per year.

Benefit costs and plan contributions for pension and other plans are summarized as follows:

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Current service cost (employer)	11,117	10,547	3,107	2,857
Interest cost	29,292	28,143	5,120	4,797
Expected return on plan assets	(27,626)	(26,053)	–	–
Amortization of net actuarial loss	(1,173)	(667)	(100)	(753)
Benefit cost	**11,610**	**11,970**	**8,127**	**6,901**

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Employer contribution/other benefit payments	13,052	12,851	2,377	2,314
Plan participants' contributions	5,811	5,162	–	–
Benefits paid	23,317	21,155	2,377	2,314

The most recent actuarial valuation of the registered pension plan for funding purposes was at January 1, 2014, and the next required valuation is to be effective January 1, 2017.

Principal assumptions used to calculate benefit costs for the year are determined at the beginning of the period and are as follows:

	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
Discount rate at the beginning of the period	6.00%	6.15%	6.00%	6.15%
Rate of compensation increase	3.75%	3.75%	3.75%	3.75%
Rate of indexing	2.25%	2.25%	2.25%	2.25%

9. TANGIBLE CAPITAL ASSETS

Net tangible capital assets consist of the following:

Tangible Capital Assets

(in thousands of Canadian dollars)	As at December 31, 2015	Additions	Disposals	As at December 31, 2016
	$	$	$	$
Facilities	52,281	3,692	–	55,973
Market systems and applications	278,458	28,535	–	306,993
Infrastructure and other assets	60,180	3,175	–	63,355
Meter data management/repository	35,900	1,011	–	36,911
Total cost	**426,819**	**36,413**	**–**	**463,232**

Accumulated Amortization

(in thousands of Canadian dollars)	As at December 31, 2015	Amortization Expense	Disposals	As at December 31, 2016
	$	$	$	$
Facilities	(22,604)	(1,697)	–	(24,301)
Market systems and applications	(251,210)	(12,336)	–	(263,546)
Infrastructure and other assets	(47,228)	(5,544)	–	(52,772)
Meter data management/repository	(25,329)	(3,861)	–	(29,190)
Total accumulated amortization	**(346,371)**	**(23,438)**	**–**	**(369,809)**

Net Book Value

(in thousands of Canadian dollars)	As at December 31, 2015	As at December 31, 2016
	$	$
Facilities	29,677	31,672
Market systems and applications	27,248	43,447
Infrastructure and other assets	12,952	10,583
Meter data management/repository	10,571	7,721
Total net book value	**80,448**	**93,423**
Assets under construction	23,268	11,624
Net tangible capital assets	**103,716**	**105,047**

In 2016, there were no adjustments to management's estimates of remaining asset service lives (2015 – decrease of $653 thousand).

Interest capitalized to assets under construction during 2016 was $260 thousand (2015 – $263 thousand).

10. OTHER REVENUE

In its administration of the IESO-administered markets, the IESO directs the investment of market funds in highly rated, short-term investments throughout the settlement cycle. The IESO is entitled to receive the investment interest and investment gains, net of investment losses earned on funds passing through the real-time market settlement accounts. The IESO is not entitled to the principal on real-time market investments.

The IESO recognized investment income earned in the market settlement accounts of $2,508 thousand in 2016 (2015 – $3,212 thousand).

11. RELATED PARTY TRANSACTIONS

The Province of Ontario is a related party as it is the controlling entity of the IESO. The OEFC, OEB, Hydro One and Ontario Power Generation Inc. (OPG) are related parties of the IESO, through the common control of the Province of Ontario. Transactions between these parties and the IESO were as follows:

The IESO holds a note payable and an unsecured credit facility agreement with the OEFC (Note 7). Interest payments made by the IESO in 2016 for the note payable were $1,841 thousand (2015 – $1,841 thousand) and for the credit facility were $nil (2015 – $328 thousand). As of December 31, 2016, the IESO had an accrued interest payable balance with the OEFC of $315 thousand (2015 – $315 thousand).

Under the *Ontario Energy Board Act, 1998*, the IESO incurs registration and license fees. The total of the transactions with the OEB was $1,747 thousand in 2016 (2015 – $1,671 thousand).

The IESO performed connection and bulk electric system exception assessments for Hydro One in 2016. In 2016, the IESO invoiced Hydro One $610 thousand (2015 – $310 thousand).

The IESO procures short circuit studies and protection impact assessments as part of connection assessments, approvals and meter services on IESO-owned interconnected revenue meters from Hydro One. Additionally, the IESO paid Hydro One for the removal of the microwave tower at the Clarkson location. In 2016, the IESO incurred costs of $188 thousand (2015 – $525 thousand) for these services. As of December 31, 2016, the IESO had a net payable balance with Hydro One of $4 thousand (2015 – $149 thousand).

The IESO performed connection assessment and approvals for OPG, administered telecommunication services to market participants to connect to the real-time market systems and provides market-related training courses. In 2016, OPG was invoiced $124 thousand (2015 – $137 thousand). As of December 31, 2016, the IESO had a net receivable balance with OPG of $5 thousand (2015 – $4 thousand).

12. FINANCIAL RISK MANAGEMENT

The IESO is exposed to financial risks in the normal course of its business operations, including market risks resulting from volatilities in equity, debt and foreign currency exchange markets, as well as credit risk and liquidity risk. The nature of the financial risks and the IESO's strategy for managing these risks have not changed significantly from the prior year.

a) Market Risk

Market risk refers to the risk that the fair value or future cash flows of a financial instrument will fluctuate to cause changes in market prices. The IESO is primarily exposed to three types of market risk: currency risk, interest rate risk and equity risk. The IESO monitors its exposure to market risk fluctuations and may use financial instruments to manage these risks as it considers appropriate. The IESO does not use derivative instruments for trading or speculative purposes.

i) Currency Risk

The IESO conducts certain transactions in U.S. dollars, primarily related to vendors' payments, and maintains a U.S. dollar-denominated bank account. From time to time, the IESO may utilize forward purchase contracts to purchase U.S. dollars for delivery at a specified date in the future at a fixed exchange rate. In addition, the IESO utilizes U.S. dollar spot rate purchases in order to satisfy any current accounts. As at December 31, 2016, the IESO did not have any outstanding forward purchase contracts.

ii) Interest Rate Risk

The IESO is exposed to movements or changes in interest rates primarily through its short-term variable rate credit facility, cash equivalents' securities and long-term investments. Long-term investments include investments in a pooled Canadian bond fund. The potential impact to the securities' value had the prevailing interest rates changed by 25 basis points, assuming a parallel shift in the yield curve with all other variables held constant, is estimated at $0.6 million as at December 31, 2016 (2015 – $0.6 million).

iii) Equity Risk

The IESO is exposed to changes in equity prices through its long-term investments. Long-term investments include investments in pooled equity funds. A 30% change in the valuation of equities as at December 31, 2016, would have resulted in a change for the year of approximately $7.5 million (2015 – $6.8 million). The fair values of all financial instruments measured at fair value are derived from quoted prices (unadjusted) in active markets for identical assets.

b) Credit Risk

Credit risk refers to the risk that one party to a financial instrument may cause a financial loss for the other party by failing to meet its obligations under the terms of the financial instrument. The IESO is exposed directly to credit risk related to cash equivalents' securities and accounts receivable, and indirectly through its exposure to the long-term investments in a Canadian bond pooled fund. The IESO manages credit risk associated with cash equivalents' securities through an approved management policy that limits investments to primarily investment-grade investments with counterparty-specific limits. The accounts receivable balance as at December 31, 2016, included no material items past due and substantially all of the balance was collected within 30 days from December 31, 2016. The long-term Canadian bond pooled fund is comprised of primarily investment-grade securities.

c) Liquidity Risk

Liquidity risk refers to the risk that the IESO will encounter financial difficulty in meeting obligations associated with its financial liabilities when due. The IESO manages liquidity risk by forecasting cash flows to identify cash flows and financing requirements. Cash flows from operations, short-term investments, long-term investments and maintaining appropriate credit facilities help to reduce liquidity risk. The IESO's long-term investments are normally able to be redeemed within three business days; however, the investment manager of the pooled funds has the authority to require a redemption in-kind rather than cash and has the ability to suspend redemptions if deemed necessary.

13. COMMITMENTS

Operating commitments

The obligations of the IESO with respect to non-cancellable operating leases over the next four years are as follows:

As at December 31 (thousands of Canadian dollars)

	$
2017	5,489
2018	5,004
2019	3,919
2020	3,195

14. CONTINGENCIES

The IESO is subject to various claims, legal actions and investigations that arise in the normal course of business. While the final outcome of such matters cannot be predicted with certainty, management believes that the resolution of such claims, actions and investigations will not have a material impact on the IESO's financial position or results of operations.

15. COMPARATIVE FIGURES

Certain comparative figures have been reclassified to conform with the financial statement presentation adopted in 2016.

Executive Compensation at the IESO

Program Objectives

The IESO compensation program for executives was designed to attract, retain and motivate the calibre of executives required to support the achievement of the IESO's statutory mandate, business objectives and corporate vision. Accordingly, the compensation philosophy and programs were built on the following objectives:

- to focus executives on meeting the IESO's business objectives
- to attract and retain qualified and talented staff needed to carry out the IESO's mandate
- to have the flexibility to reward results and demonstrated competencies
- to have compensation levels that are appropriate and defensible to stakeholders and customers.

The philosophy underlying these objectives is that total compensation for executives should be adequate enough to attract and retain the skills and competencies necessary to carry out the IESO's mandate.

Program Governance

The IESO Board establishes the compensation objectives for the following year's program. They delegate the responsibility to thoroughly review the compensation objectives, policies and programs to the Human Resources and Governance Committee (HRGC) of the Board, which make recommendations to the full Board for approval.

The Board is comprised of 10 independent, external Board members, appointed by the Minister of Energy, with broad experience in the electricity industry and public sector organizations, and the President and Chief Executive Officer of the IESO. Their experience includes many years of dealing with human resource matters including the setting and implementation of compensation policies and programs.

In carrying out their mandate, the Board members have access to management's analysis and recommendations as well as those of expert consultants in the compensation field. These programs are reviewed annually with regard to business needs, program objectives and design, industry compensation trends, internal compensation relativities and external market relativities.

The Board also assesses risks associated with the establishment and implementation of compensation policies and programs. Annually the Board presides over and approves the IESO's business plan. An important component of this process is consideration of, and the implementation of, mitigating actions associated with enterprise risk management. This latter overarching process includes the assessment of all significant risks to the IESO, including risks associated with its compensation policies and programs.

In addition to the formal governance and oversight structure in place for compensation matters, the IESO discloses compensation levels annually for staff earning $100,000 or more as part of its public sector salary disclosure. For the IESO, a further level of public review and assurance is provided through a statutorily required annual review of the IESO's expenditures, revenue requirements and fees. Information related to compensation matters, including executive/management compensation and market relativities, is subject to the Ontario Energy Board review. A range of small and large consumers, assisted by their legal and professional advisors, are represented in these public proceedings.

Market Comparisons

The IESO reviews the competitiveness of the executive compensation levels in relation to a peer group of Canadian organizations and general industry companies every other year at a minimum. The objective is to compare IESO executive compensation levels to those in the marketplace particularly in relation to the median of the market.

Prior to the amalgamation of the IESO with the OPA, the Ministry of Energy had retained the Hay Group, a global management consulting firm, to evaluate and market price the CEO position for the new organization. Following Mr. Campbell's appointment to the CEO position on January 1, 2015, the decision was made to adopt a similar approach to evaluate and market price all other executive roles using the Hay point system.

As part of this process, the comparator group was redefined consistent with the recommendations of the Agency Review Panel (the Arnett report) and is comprised of 13 public sector and 11 private sector organizations, with the comparator data weighted on a 50/50 public/private sector basis. The comparator group represents a range of industries, core business activities and roles that are similar to IESO: electricity, energy, asset management, financial services, infrastructure procurement, engineering and large-scale, complex IT functions. The list of organizations can be viewed in the 2015 Annual Report.

The Broader Public Sector Executive Compensation Framework regulation (O. Reg 304/16) came into force in 2016 for implementation in 2017. The IESO's executive compensation program will be reviewed in accordance with this regulation and made available on the IESO's website by September 2017.

The job evaluation was independently conducted by the Hay Group using its point system and the following executive positions were covered by this review:

- President & CEO
- VP Corporate Services & CFO
- VP Market & Resource Development
- VP Market & System Operations & COO
- VP Conservation & Corporate Relations
- VP Information and Technology Services and CIO
- VP Planning, Law & Aboriginal Relations.

The Hay Group evaluated the Vice-President positions based on the job documents and additional information gathered from the CEO. Based on the evaluation points, a new salary structure was developed. The executive positions were then mapped into the new structure based upon their evaluated points.

Using the market information from the above peer group, the mid-point of the range of points for each executive salary grade was determined as the market price point for comparison purposes.

The mid-points of the new salary ranges were defined as the total direct cash compensation (annual base salaries plus annual short-term and long-term target incentive awards) of the hybrid market's price point at the 50th percentile for each salary grade.

The minimums and maximums of each salary range were calculated using typical salary range spreads at executive levels. In accordance with the *Broader Public Sector Accountability Act* (2010), executive compensation rates have remained the same in 2016 and will be reviewed against the Executive Compensation Framework regulation in 2017.

Program Description

The IESO program includes fixed and variable compensation, core and flex benefit plans, and pension provisions. IESO Human Resources staff participate in and review results from various compensation surveys and monitor economic trends, such as inflation and unemployment rates, which impact on compensation, as well as internal compensation relativities. Based on this data and the IESO business priorities, Human Resources staff develop recommendations on compensation programs. External specialized compensation, benefit and pension consultants are utilized to ensure accurate, representative market compensation data is obtained, that current industry compensation trends are being utilized, as well as provide insight and recommended adjustments to current programs.

Program Description – Fixed Compensation

Within the IESO salary ranges, individuals are assessed relative to an established competency model. This model consists of behavioural competencies such as strategic agility, building effective teams, command skills, sizing up people, political savvy and managing vision and purpose. Assessments are based upon demonstrated competency. Each individual is awarded a fixed compensation level within his or her band based upon his or her assessed competency.

Program Description – Variable Compensation

In order to promote a results orientation in the executive team, the variable pay plan forms part of the total compensation of executives. The IESO Board annually establishes a robust set of performance measures, which are evaluated each year.

The IESO Board assesses the corporate performance results and the CEO's individual performance results. Under the plan, having assessed the results against target, the Board has the ability to use some discretion in determining the final performance rating – however in the past, apart from one occasion, the Board has relied upon the directly assessed results to award variable compensation.

The variable compensation award for the CEO and Vice-Presidents is capped at 10% of fixed compensation. The plan provides for awards below the capped amount depending on the performance results achieved. The 2016 annual award was paid on December 30, 2016.

Program Description – Group Benefits

The group benefit plan provides a core level of health and dental benefits, life insurance, disability coverage and vacation, which can be adjusted by individual executives through a flexible component within the plan. The flexible element provides executives the option of adjusting their benefits to meet their individual/family needs, including vacation above core amounts, levels of life insurance, health coverage and other components.

Program Description – Pension Plan

A defined benefit pension plan provides annual retirement income calculated as 2% of pensionable earnings during the highest paid 60 consecutive months of service multiplied by years of service (36 months for the pension earned prior to January 1, 2017, by the former IESO executives), to a maximum of 35 years. The pension formula is integrated with the Canada Pension Plan (CPP) to provide a level income stream before and after age 65, when the IESO pension is reduced to reflect benefits from CPP. The plan also has early retirement provisions as well as commuted value, pension deferral and reciprocal transfer options.

The plan provides a maximum benefit of 70% of highest paid, pre-retirement pensionable earnings. As the Canadian Revenue Agency limits the amount of pension payable from a registered plan, the IESO has a secured supplemental employee retirement plan to provide required pension income to meet the commitments of the plan above that payable from the registered plan.

The plan also provides several options including member's life only or joint and survivor pensions, as well as pre-retirement death benefits to provide benefits to surviving spouses or beneficiaries.

Performance Measures & Impact on Compensation

The IESO annually establishes corporate performance measures relating to its business priorities during the business planning process. These are approved, monitored and assessed by the IESO Board of Directors each year. Individual performance measures supporting one or more corporate performance measures are also developed for each executive. As outlined above, the corporate results achieved each year impact on each executive's variable pay.

For 2016, the Board assessed the corporate results and determined that the IESO met all expectations. In addition to the corporate measures, each executive also had an individual set of measures and targets for the year, which aligned with the corporate performance objectives and IESO's business priorities, and these were similarly assessed. The Board assessed the results of the CEO's performance and the CEO assessed the performance of the Vice-Presidents, which were also reviewed with the Board.

Other Considerations

Compensation decisions may at times be impacted by market factors – such as the recruitment of an executive with specialized skills/competencies or possessing unique talents within the industry. To this end, individual incumbent arrangements are sometimes established relating to terms of employment and the possibility of future termination.

The VP Market & Systems Operations and COO retired in December 2016 and was replaced by an internal senior-level employee after a thorough internal and external search was completed.

Compensation Restraints

The IESO executive compensation has been significantly impacted by the compensation restraint legislation in Ontario since 2010. The *Broader Public Sector Accountability Act* (BPSAA) imposes a general freeze on designated executives' salary, variable pay, benefits and perquisites subject to very limited exceptions.

Following the amalgamation of the two former organizations (IESO and OPA) on January 1, 2015, the total 2015 variable performance pay amount awarded to all employees and office holders became the cap for total variable performance pay to be paid out in future years as long as the BPSAA remains in effect. The total variable compensation paid in 2016 was within this maximum.

Executive Compensation Structure Alignment

With the appointment on January 1, 2015, of Mr. Campbell as the CEO of the merged organization, the IESO aligned the compensation plan for its Vice-Presidents with the structure established for the new CEO. Accordingly, in both cases, the variable pay component was capped at 10% of fixed compensation with no deferral. There were no salary adjustments for executives in 2016. .

The figures reported as 2016 "Salary Paid" in the 2016 Public Sector Salary Disclosure for the executives include the 2016 earned variable compensation that was paid on December 30, 2016.

Executive Compensation Statement

The table below details the annual compensation for the year ended December 30, 2016, for the executives listed.

2016 Summary Compensation Table

Name & Position	Base Salary	Variable Pay[1]	Other Annual Compensation[2]	Total Cash Compensation[3]
Bruce Campbell President & CEO	$536,364	$53,636	$32,527	$622,527
Kimberly Marshall VP Corporate Services & CFO	$268,460	$13,423	$5,305	$287,188
JoAnne Butler VP Market & Resource Development	$339,968	$30,600	$1,037	$371,605
Kim Warren *(retired Dec. 31, 2016)* VP Market & System Operations & COO	$319,228	$30,330	$15,893	$365,451
Terence Young VP Conservation & Corporate Relations	$307,037	$29,170	$22,065	$358,272

1. 2016 earned variable compensation was paid in December 2016
2. Represents remaining flex credits paid out at year end as taxable income
3. These amounts will be reported as "Salary Paid" under the Annual Public Sector Salary Disclosure

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From:	Olga Whiteley
To:	Mike Manning
Cc:	Anthony Martinello
Subject:	IESO Financial Information Pursuant to Note Payable - Q3 2016
Date:	Monday, November 28, 2016 2:17:52 PM
Attachments:	Financial Statements Q3 2016.pdf

Dear Mike,

As required by the April 1, 1999 Note Agreement between IESO and OEFC, please find attached a copy of IESO's Q3 2016 unaudited financial statements.

Please let us know if you have any questions or concerns.

Best regards,

Olga.

Olga Whiteley, CFA | Treasury and Pension Operations

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Independent Electricity System Operator
Statements of Financial Position
Unaudited

As at (in thousands of Canadian dollars)	September 30, 2016	December 31, 2015
	$	
FINANCIAL ASSETS		
Cash and cash equivalents	22,836	14,715
Accounts receivable	39,547	33,199
Long-term investments	40,207	37,318
TOTAL FINANCIAL ASSETS	**102,590**	**85,232**
LIABILITIES		
Accounts payable and accrued liabilities	33,914	48,868
Accrued interest on debt	776	315
Rebates due to market participants	14,069	9,595
Debt	90,000	90,000
Accrued pension liability	33,961	36,062
Accrued liability for employee future benefits other than pension	88,813	84,501
TOTAL LIABILITIES	**261,533**	**269,341**
NET DEBT	**(158,943)**	**(184,109)**
NON-FINANCIAL ASSETS		
Net tangible capital assets	106,826	103,716
Prepaid expenses	6,833	6,197
TOTAL NON-FINANCIAL ASSETS	**113,659**	**109,913**
ACCUMULATED SURPLUS / (DEFICIT)		
Accumulated deficit from operations (Note 2)	(54,652)	(81,854)
Accumulated remeasurement gains	9,368	7,658
ACCUMULATED DEFICIT	**(45,284)**	**(74,196)**

Independent Electricity System Operator
Statement of Operations and Accumulated Deficit
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Budget	2016 Actual	2015 Actual
IESO CORE OPERATIONS	**$**	**$**	**$**
System fees	134,734	139,004	144,777
Other revenue	750	1,886	4,470
Interest and investment income	-	862	505
Core operation revenues	**135,484**	**141,752**	**149,752**
Compensation and benefits	(80,000)	(78,257)	(75,651)
Professional and consulting	(12,699)	(10,668)	(14,113)
Operating and administration	(25,029)	(24,512)	(25,456)
Core operating expenses	**(117,728)**	**(113,437)**	**(115,220)**
Amortization	(13,706)	(14,827)	(12,463)
Interest expense and financing charges	(553)	(898)	(1,177)
Core expenses	**(131,987)**	**(129,162)**	**(128,860)**
Core operations annual surplus	**3,497**	**12,590**	**20,892**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	-	**2,557**	**11,819**
Compensation and benefits	(2,102)	(1,571)	(2,342)
Professional and consulting	(1,136)	(537)	(686)
Operating and administration	(112)	(535)	(85)
Customer education and market enforcement expenses	**(3,350)**	**(2,643)**	**(3,113)**
Market sanctions and payment adjustments annual surplus/(deficit)	**(3,350)**	**(86)**	**8,706**
SMART METERING ENTITY			
Smart metering charge	**33,905**	**34,988**	**34,662**
Compensation and benefits	(2,508)	(1,870)	(1,943)
Professional and consulting	(13,996)	(10,771)	(11,294)
Operating and administration	(1,774)	(4,463)	(2,577)
Smart metering operating expenses	**(18,278)**	**(17,104)**	**(15,814)**
Amortization	(3,252)	(2,733)	(2,654)
Interest expense and financing charges	(2,330)	(453)	(755)
Smart metering expenses	**(23,860)**	**(20,290)**	**(19,223)**
Smart metering entity annual surplus	**10,045**	**14,698**	**15,439**
ANNUAL SURPLUS	**10,192**	**27,202**	**45,037**
ACCUMULATED DEFICIT FROM OPERATIONS, BEGINNING OF PERIOD	(81,854)	(81,854)	(116,221)
ACCUMULATED DEFICIT FROM OPERATIONS, END OF PERIOD	**(71,662)**	**(54,652)**	**(71,184)**

Independent Electricity System Operator
Statement of Remeasurement Gains and Losses
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Actual $	2015 Actual $
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	**7,658**	**6,362**
UNREALIZED GAINS ATTRIBUTABLE TO:		
Foreign exchange - other	478	435
Portfolio investments	1,747	699
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange - other	(515)	(591)
NET REMEASUREMENT GAINS FOR THE PERIOD	**1,710**	**543**
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	**9,368**	**6,905**

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Independent Electricity System Operator
Statements of Change in Net Debt
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual $
SURPLUS FOR THE PERIOD	**10,192**	**27,202**	**45,037**
Change in accrued liability for employee future benefits other than pension	-	-	(6,567)
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(19,884)	(20,670)	(16,940)
Amortization of tangible capital assets	16,958	17,560	15,116
Change in prepaid expenses	-	(636)	(815)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	**(2,926)**	**(3,746)**	**(2,639)**
NET REMEASUREMENT GAINS FOR THE PERIOD	-	1,710	543
CHANGE IN NET DEBT	**7,266**	**25,166**	**36,374**
NET DEBT, BEGINNING OF PERIOD	(184,109)	(184,109)	(209,016)
NET DEBT, END OF PERIOD	**(176,843)**	**(158,943)**	**(172,642)**

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Independent Electricity System Operator
Statements of Cash Flows
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016	2015
	$	$
OPERATING TRANSACTIONS		
Change in accumulated deficit		
Surplus	27,202	45,037
OPEB past service costs		(6,567)
	27,202	38,470
Changes in non-cash items		
Amortization	17,560	15,116
Pension expense	8,614	7,140
Other employee future benefits expense	6,095	11,691
	32,269	33,947
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(13,306)	(7,168)
Change in accounts receivable	(6,348)	(14,393)
Change in rebates due to market participants	4,474	-
Change in prepaid expenses	(636)	(815)
	(15,816)	(22,376)
Other:		
Contribution to pension fund	(10,715)	(12,778)
Payment of employee future benefits	(1,783)	(1,725)
	(12,498)	(14,503)
Cash provided by operating transactions	**31,157**	**35,538**
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(20,670)	(16,940)
Change in accounts payable & accrued liabilities	(1,187)	(3,877)
Cash applied to capital transactions	**(21,857)**	**(20,817)**
INVESTING TRANSACTIONS		
Purchase of long-term investments	(1,142)	(772)
Cash applied to investing transactions	**(1,142)**	**(772)**
FINANCING TRANSACTIONS		
Retire debt	-	(14,000)
Cash applied to financing transactions	**-**	**(14,000)**
INCREASE IN CASH AND CASH EQUIVALENTS	8,158	(51)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	14,715	31,340
Unrealized foreign exchange losses for the period	(37)	(156)
CASH AND CASH EQUIVALENTS - END OF PERIOD	**22,836**	**31,133**

1) INTERIM FINANCIAL STATEMENTS

The interim financial statements follow the same accounting policies and methods of their application as the 2015 IESO annual financial statements.

The interim financial statements have been prepared on a going concern basis and should be read in conjunction with the 2015 IESO annual financial statement.

2) REBATES DUE TO MARKET PARTICIPANTS AND ACCUMULATED DEFICIT

As at September 30, 2016 and December 31, 2015, the components of the IESO's Accumulated Deficit were as follows:

Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016	As at December 31, 2015
Approved regulatory deferral account	19,656	10,000
Accumulated market sanctions and payment adjustments	406	492
Smart metering entity – accumulated deficit	(26,151)	(40,849)
Pension and OPEB adjustments	(44,419)	(47,353)
Remeasurement gains/(losses)	5,224	3,514
Accumulated deficit – end of period	**(45,284)**	**(74,196)**

Approved Regulatory Deferral Account

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated surplus – December 31, 2015	10,000
Revenues (before rebates due to market participants)	146,226
Rebates due to market participants	(4,474)
IESO operation expenses	(129,162)
Recovery of PSAB transitional items	(2,934)
Accumulated surplus – end of period	**19,656**

Accumulated Market Sanctions and Payment Adjustments

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated surplus – December 31, 2015	492
Market sanctions and payment adjustments	2,557
Customer education and market enforcement expenses	(2,643)
Accumulated surplus – end of period	**406**

Smart Metering Entity – Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated deficit – December 31, 2015	(40,849)
Smart metering charge	34,988
Smart metering expenses	(20,290)
Accumulated deficit – end of period	**(26,151)**

Pension and OPEB Adjustments - Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated deficit - December 31, 2015	(47,353)
Recovery of PSAB transitional items	2,934
Accumulated deficit – end of period	**(44,419)**

3) DEBT

Note Payable to Ontario Electricity Finance Corporation (OEFC)

In April 2014, the IESO entered into a three-year note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 2.046% per annum and is repayable in full on April 30, 2017. Interest accrues daily and is payable in arrears semi-annually in April and October of each year. As at September 30, 2016, the note payable to the OEFC was $90.0 million (December 31, 2015 - $90.0 million).

Credit Facility

The IESO has an unsecured credit facility agreement with the OEFC, which will make available to the IESO an amount up to $95.0 million. Advances under the credit facility are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing for a 30 day term plus 0.50% per annum, with draws, repayments and interest payments due monthly. The credit facility expires April 30, 2017. As at September 30, 2016, $0.0 million was drawn on the credit facility (December 31, 2015 - $0.0 million).

From:	Olga Whiteley
To:	Mike Manning
Cc:	Anthony Martinello
Subject:	IESO Financial Information Pursuant to Note Payable - Q3 2016
Date:	Monday, November 28, 2016 2:17:52 PM
Attachments:	Financial Statements Q3 2016.pdf

Dear Mike,

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Please let us know if you have any questions or concerns.

Best regards,

Olga.

Olga Whiteley, CFA | Treasury and Pension Operations

Independent Electricity System Operator (IESO) | T: (905) 403-6917 | F: (905) 403-6913

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Independent Electricity System Operator
Statements of Financial Position
Unaudited

As at (in thousands of Canadian dollars)	September 30, 2016	December 31, 2015
	$	
FINANCIAL ASSETS		
Cash and cash equivalents	22,836	14,715
Accounts receivable	39,547	33,199
Long-term investments	40,207	37,318
TOTAL FINANCIAL ASSETS	**102,590**	**85,232**
LIABILITIES		
Accounts payable and accrued liabilities	33,914	48,868
Accrued interest on debt	776	315
Rebates due to market participants	14,069	9,595
Debt	90,000	90,000
Accrued pension liability	33,961	36,062
Accrued liability for employee future benefits other than pension	88,813	84,501
TOTAL LIABILITIES	**261,533**	**269,341**
NET DEBT	**(158,943)**	**(184,109)**
NON-FINANCIAL ASSETS		
Net tangible capital assets	106,826	103,716
Prepaid expenses	6,833	6,197
TOTAL NON-FINANCIAL ASSETS	**113,659**	**109,913**
ACCUMULATED SURPLUS / (DEFICIT)		
Accumulated deficit from operations (Note 2)	(54,652)	(81,854)
Accumulated remeasurement gains	9,368	7,658
ACCUMULATED DEFICIT	**(45,284)**	**(74,196)**

Independent Electricity System Operator
Statement of Operations and Accumulated Deficit
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Budget	2016 Actual	2015 Actual
IESO CORE OPERATIONS	**$**	**$**	**$**
System fees	134,734	139,004	144,777
Other revenue	750	1,886	4,470
Interest and investment income	-	862	505
Core operation revenues	**135,484**	**141,752**	**149,752**
Compensation and benefits	(80,000)	(78,257)	(75,651)
Professional and consulting	(12,699)	(10,668)	(14,113)
Operating and administration	(25,029)	(24,512)	(25,456)
Core operating expenses	**(117,728)**	**(113,437)**	**(115,220)**
Amortization	(13,706)	(14,827)	(12,463)
Interest expense and financing charges	(553)	(898)	(1,177)
Core expenses	**(131,987)**	**(129,162)**	**(128,860)**
Core operations annual surplus	**3,497**	**12,590**	**20,892**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	-	**2,557**	**11,819**
Compensation and benefits	(2,102)	(1,571)	(2,342)
Professional and consulting	(1,136)	(537)	(686)
Operating and administration	(112)	(535)	(85)
Customer education and market enforcement expenses	**(3,350)**	**(2,643)**	**(3,113)**
Market sanctions and payment adjustments annual surplus/(deficit)	**(3,350)**	**(86)**	**8,706**
SMART METERING ENTITY			
Smart metering charge	**33,905**	**34,988**	**34,662**
Compensation and benefits	(2,508)	(1,870)	(1,943)
Professional and consulting	(13,996)	(10,771)	(11,294)
Operating and administration	(1,774)	(4,463)	(2,577)
Smart metering operating expenses	**(18,278)**	**(17,104)**	**(15,814)**
Amortization	(3,252)	(2,733)	(2,654)
Interest expense and financing charges	(2,330)	(453)	(755)
Smart metering expenses	**(23,860)**	**(20,290)**	**(19,223)**
Smart metering entity annual surplus	**10,045**	**14,698**	**15,439**
ANNUAL SURPLUS	**10,192**	**27,202**	**45,037**
ACCUMULATED DEFICIT FROM OPERATIONS, BEGINNING OF PERIOD	(81,854)	(81,854)	(116,221)
ACCUMULATED DEFICIT FROM OPERATIONS, END OF PERIOD	**(71,662)**	**(54,652)**	**(71,184)**

Independent Electricity System Operator
Statement of Remeasurement Gains and Losses
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Actual $	2015 Actual $
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	**7,658**	**6,362**
UNREALIZED GAINS ATTRIBUTABLE TO:		
Foreign exchange - other	478	435
Portfolio investments	1,747	699
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange - other	(515)	(591)
NET REMEASUREMENT GAINS FOR THE PERIOD	**1,710**	**543**
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	**9,368**	**6,905**

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Independent Electricity System Operator
Statements of Change in Net Debt
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual $
SURPLUS FOR THE PERIOD	**10,192**	**27,202**	**45,037**
Change in accrued liability for employee future benefits other than pension	-	-	(6,567)
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(19,884)	(20,670)	(16,940)
Amortization of tangible capital assets	16,958	17,560	15,116
Change in prepaid expenses	-	(636)	(815)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	**(2,926)**	**(3,746)**	**(2,639)**
NET REMEASUREMENT GAINS FOR THE PERIOD	-	1,710	543
CHANGE IN NET DEBT	**7,266**	**25,166**	**36,374**
NET DEBT, BEGINNING OF PERIOD	(184,109)	(184,109)	(209,016)
NET DEBT, END OF PERIOD	**(176,843)**	**(158,943)**	**(172,642)**

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Independent Electricity System Operator
Statements of Cash Flows
Unaudited

For the nine months ended September 30 (in thousands of Canadian dollars)	2016	2015
	$	$
OPERATING TRANSACTIONS		
Change in accumulated deficit		
Surplus	27,202	45,037
OPEB past service costs		(6,567)
	27,202	38,470
Changes in non-cash items		
Amortization	17,560	15,116
Pension expense	8,614	7,140
Other employee future benefits expense	6,095	11,691
	32,269	33,947
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(13,306)	(7,168)
Change in accounts receivable	(6,348)	(14,393)
Change in rebates due to market participants	4,474	-
Change in prepaid expenses	(636)	(815)
	(15,816)	(22,376)
Other:		
Contribution to pension fund	(10,715)	(12,778)
Payment of employee future benefits	(1,783)	(1,725)
	(12,498)	(14,503)
Cash provided by operating transactions	**31,157**	**35,538**
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(20,670)	(16,940)
Change in accounts payable & accrued liabilities	(1,187)	(3,877)
Cash applied to capital transactions	**(21,857)**	**(20,817)**
INVESTING TRANSACTIONS		
Purchase of long-term investments	(1,142)	(772)
Cash applied to investing transactions	**(1,142)**	**(772)**
FINANCING TRANSACTIONS		
Retire debt	-	(14,000)
Cash applied to financing transactions	**-**	**(14,000)**
INCREASE IN CASH AND CASH EQUIVALENTS	8,158	(51)
CASH AND CASH EQUIVALENTS - BEGINNING OF PERIOD	14,715	31,340
Unrealized foreign exchange losses for the period	(37)	(156)
CASH AND CASH EQUIVALENTS - END OF PERIOD	**22,836**	**31,133**

1) INTERIM FINANCIAL STATEMENTS

The interim financial statements follow the same accounting policies and methods of their application as the 2015 IESO annual financial statements.

The interim financial statements have been prepared on a going concern basis and should be read in conjunction with the 2015 IESO annual financial statement.

2) REBATES DUE TO MARKET PARTICIPANTS AND ACCUMULATED DEFICIT

As at September 30, 2016 and December 31, 2015, the components of the IESO's Accumulated Deficit were as follows:

Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016	As at December 31, 2015
Approved regulatory deferral account	19,656	10,000
Accumulated market sanctions and payment adjustments	406	492
Smart metering entity – accumulated deficit	(26,151)	(40,849)
Pension and OPEB adjustments	(44,419)	(47,353)
Remeasurement gains/(losses)	5,224	3,514
Accumulated deficit – end of period	**(45,284)**	**(74,196)**

Approved Regulatory Deferral Account

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated surplus – December 31, 2015	10,000
Revenues (before rebates due to market participants)	146,226
Rebates due to market participants	(4,474)
IESO operation expenses	(129,162)
Recovery of PSAB transitional items	(2,934)
Accumulated surplus – end of period	**19,656**

Accumulated Market Sanctions and Payment Adjustments

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated surplus – December 31, 2015	492
Market sanctions and payment adjustments	2,557
Customer education and market enforcement expenses	(2,643)
Accumulated surplus – end of period	**406**

Smart Metering Entity – Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated deficit – December 31, 2015	(40,849)
Smart metering charge	34,988
Smart metering expenses	(20,290)
Accumulated deficit – end of period	**(26,151)**

Pension and OPEB Adjustments - Accumulated Deficit

(in thousands of Canadian dollars)	As at September 30, 2016
Accumulated deficit - December 31, 2015	(47,353)
Recovery of PSAB transitional items	2,934
Accumulated deficit – end of period	**(44,419)**

3) DEBT

Note Payable to Ontario Electricity Finance Corporation (OEFC)

In April 2014, the IESO entered into a three-year note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 2.046% per annum and is repayable in full on April 30, 2017. Interest accrues daily and is payable in arrears semi-annually in April and October of each year. As at September 30, 2016, the note payable to the OEFC was $90.0 million (December 31, 2015 - $90.0 million).

Credit Facility

The IESO has an unsecured credit facility agreement with the OEFC, which will make available to the IESO an amount up to $95.0 million. Advances under the credit facility are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing for a 30 day term plus 0.50% per annum, with draws, repayments and interest payments due monthly. The credit facility expires April 30, 2017. As at September 30, 2016, $0.0 million was drawn on the credit facility (December 31, 2015 - $0.0 million).

From: Olga Whiteley
To: Mike Manning
Cc: Anthony Martinello
Subject: IESO Financial Information Pursuant to Note Payable - 2016
Date: Friday, March 31, 2017 7:41:14 AM
Attachments: IESO_2016_Financials.pdf

Dear Mike,

As required by the April 1, 1999 Note Agreement between IESO and OEFC, please find attached a copy of IESO's 2016 audited financial statements.

Please let us know if you have any questions or concerns,

Best regards,

Olga.

Olga Whiteley, CFA | Treasury and Pension Operations

Independent Electricity System Operator (IESO) | T: (905) 403-6917 | F: (905) 403-6913

Station A, Box 4474, Toronto, ON M5W 4E5

Web: www.ieso.ca[ieso.ca] | Email: olga.whiteley@ieso.ca

2016 ANNUAL REPORT

Financial Statements

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Management Report

Management's Responsibility for Financial Reporting

The accompanying financial statements of the Independent Electricity System Operator are the responsibility of management and have been prepared in accordance with Canadian public sector accounting standards. The significant accounting policies followed by the Independent Electricity System Operator are described in the Summary of Significant Accounting Policies contained in Note 2 in the financial statements. The preparation of financial statements necessarily involves the use of estimates based on management's judgement, particularly when transactions affecting the current accounting period cannot be finalized with certainty until future periods. The financial statements have been prepared within reasonable limits of materiality and in light of information available up to March 22, 2017.

Management maintained a system of internal controls designed to provide reasonable assurance that the assets were safeguarded and that reliable information was available on a timely basis. The system included formal policies and procedures and an organizational structure that provided for the appropriate delegation of authority and segregation of responsibilities.

These financial statements have been examined by KPMG LLP, a firm of independent external auditors appointed by the Board of Directors. The external auditors' responsibility is to express their opinion on whether the financial statements are fairly presented in accordance with generally accepted accounting principles in Canada. The Auditors' Report, which follows, outlines the scope of their examination and their opinion.

INDEPENDENT ELECTRICITY SYSTEM OPERATOR

On behalf of management,

Bruce Campbell
President and Chief Executive Officer
Toronto, Canada
March 22, 2017

Kimberly Marshall
Vice President, Corporate Services
and Chief Financial Officer
Toronto, Canada
March 22, 2017

Independent Auditors' Report

To the Board of Directors of the Independent Electricity System Operator (IESO)

We have audited the accompanying financial statements of IESO, which comprise the statement of financial position as at December 31, 2016, the statements of operations and accumulated deficit, remeasurement gains and losses, change in net debt and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of IESO as at December 31, 2016, and its results of operations and the changes in its net debt and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

KPMG LLP

Chartered Professional Accountants, Licensed Public Accountants

March 22, 2017
Waterloo, Canada

Statement of Financial Position

As at (in thousands of Canadian dollars)	December 31, 2016	December 31, 2015
	$	(restated Note 3) $
FINANCIAL ASSETS		
Cash and cash equivalents	33,005	14,715
Accounts receivable	31,103	33,199
Regulated assets **(Note 3)**	65,064	88,202
Long-term investments **(Note 4)**	40,355	37,318
Market accounts – assets **(Note 3)**	1,636,201	1,443,121
TOTAL FINANCIAL ASSETS	**1,805,728**	**1,616,555**
LIABILITIES		
Accounts payable and accrued liabilities **(Note 5)**	38,963	48,868
Accrued interest on debt	315	315
Rebates due to market participants **(Note 6)**	12,551	9,595
Debt **(Note 7)**	90,000	90,000
Accrued pension liability **(Note 8)**	34,620	36,062
Accrued liability for employee future benefits other than pension **(Note 8)**	90,251	84,501
Market accounts – liabilities **(Note 3)**	1,636,201	1,443,121
TOTAL LIABILITIES	**1,902,901**	**1,712,462**
NET DEBT	(97,173)	(95,907)
NON-FINANCIAL ASSETS		
Net tangible capital assets **(Note 9)**	105,047	103,716
Prepaid expenses	6,614	6,197
TOTAL NON-FINANCIAL ASSETS	**111,661**	**109,913**
ACCUMULATED SURPLUS		
Accumulated surplus from operations **(Note 6)**	6,582	6,348
Accumulated remeasurement gains	7,906	7,658
ACCUMULATED SURPLUS	**14,488**	**14,006**

On behalf of the Board:

Tim O'Neill
Chair
Toronto, Canada

Carole Workman
Director
Toronto, Canada

Statement of Operations and Accumulated Surplus

For the year ended December 31 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual (restated Note 3) $
IESO CORE OPERATIONS			
System fees	177,219	185,531	186,187
Other revenue **(Note 10)**	1,000	2,531	5,377
Interest and investment income	–	2,157	1,430
Core operation revenues	**178,219**	**190,219**	**192,994**
Compensation and benefits	(106,361)	(105,570)	(104,994)
Professional and consulting	(20,118)	(16,844)	(21,461)
Operating and administration	(33,502)	(34,336)	(35,005)
Core operating expenses	**(159,981)**	**(156,750)**	**(161,460)**
Amortization	(17,500)	(19,577)	(17,933)
Interest	(738)	(1,341)	(1,610)
Core expenses	**(178,219)**	**(177,668)**	**(181,003)**
Core operations annual surplus before rebates	**–**	**12,551**	**11,991**
Rebates due to market participants	–	(12,551)	(9,595)
Core operations annual surplus	**–**	**–**	**2,396**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustments	4,341	3,889	6,021
Compensation and benefits	(2,981)	(2,180)	(3,094)
Professional and consulting	(1,515)	(770)	(1,351)
Operating and administration	(150)	(705)	(114)
Customer education and market enforcement expenses	**(4,646)**	**(3,655)**	**(4,559)**
Market sanctions and payment adjustments annual surplus/(deficit)	**(305)**	**234**	**1,462**
SMART METERING ENTITY			
Smart metering charge	32,244	27,426	26,185
Compensation and benefits	(3,567)	(2,661)	(2,607)
Professional and consulting	(18,763)	(14,659)	(14,902)
Operating and administration	(2,364)	(5,705)	(4,200)
Smart metering operating expenses	**(24,694)**	**(23,025)**	**(21,709)**
Amortization	(4,491)	(3,861)	(3,524)
Interest	(3,059)	(540)	(952)
Smart metering expenses	**(32,244)**	**(27,426)**	**(26,185)**
Smart metering entity annual surplus	**–**	**–**	**–**
ANNUAL SURPLUS/(DEFICIT)	**(305)**	**234**	**3,858**
ACCUMULATED SURPLUS FROM OPERATIONS, BEGINNING OF PERIOD	6,348	6,348	2,490
ACCUMULATED SURPLUS FROM OPERATIONS, END OF PERIOD	**6,043**	**6,582**	**6,348**

Statement of Remeasurement Gains and Losses

For the year ended December 31 (in thousands of Canadian dollars)	2016	2015
	Actual $	Actual (restated Note 3) $
ACCUMULATED REMEASUREMENT GAINS, BEGINNING OF PERIOD	**7,658**	**6,362**
UNREALIZED GAINS ATTRIBUTABLE TO:		
Foreign exchange – other	477	515
Portfolio investments **(Note 4)**	286	1,372
AMOUNTS RECLASSIFIED TO THE STATEMENT OF OPERATIONS:		
Foreign exchange – other	(515)	(591)
NET REMEASUREMENT GAINS FOR THE PERIOD	**248**	**1,296**
ACCUMULATED REMEASUREMENT GAINS, END OF PERIOD	**7,906**	**7,658**

Statement of Change in Net Debt

For the year ended December 31 (in thousands of Canadian dollars)	2016 Budget $	2016 Actual $	2015 Actual (restated Note 3) $
ANNUAL SURPLUS/(DEFICIT)	**(305)**	**234**	**3,858**
CHANGE IN NON-FINANCIAL ASSETS			
Acquisition of tangible capital assets	(30,706)	(24,769)	(25,624)
Amortization of tangible capital assets	21,991	23,438	21,457
Change in prepaid expenses	–	(417)	(27)
TOTAL CHANGE IN NON-FINANCIAL ASSETS	**(8,715)**	**(1,748)**	**(4,194)**
NET REMEASUREMENT GAINS FOR THE PERIOD	–	248	1,296
CHANGE IN NET DEBT	**(9,020)**	**(1,266)**	**960**
NET DEBT, BEGINNING OF PERIOD	(95,907)	(95,907)	(96,867)
NET DEBT, END OF PERIOD	**(104,927)**	**(97,173)**	**(95,907)**

Statement of Cash Flows

For the year ended December 31 (in thousands of Canadian dollars)	2016	2015
	$	(restated Note 3) $
OPERATING TRANSACTIONS		
Change in accumulated surplus:		
Annual surplus	234	3,858
	234	3,858
Changes in non-cash items:		
Amortization	23,438	21,457
Pension expense	11,610	11,970
Other employee future benefits expense	8,127	6,901
	43,175	40,328
Changes in non-cash balances related to operations:		
Change in accounts payable and accrued liabilities	(7,495)	(775)
Change in accounts receivable	2,096	(10,145)
Change in rebates due to market participants	2,956	9,595
Change in regulated assets	23,138	23,942
Change in prepaid expenses	(417)	(27)
	20,278	22,590
Other:		
Contribution to pension fund	(13,052)	(12,851)
Payment of employee future benefits	(2,377)	(2,314)
	(15,429)	(15,165)
Cash provided by operating transactions	**48,258**	**51,611**
CAPITAL TRANSACTIONS		
Acquisition of tangible capital assets	(24,769)	(25,624)
Change in accounts payable and accrued liabilities	(2,410)	(1,569)
Cash applied to capital transactions	**(27,179)**	**(27,193)**
INVESTING TRANSACTIONS		
Purchase of long-term investments	(2,751)	(1,967)
Cash applied to investing transactions	**(2,751)**	**(1,967)**
FINANCING TRANSACTIONS		
Debt repayment	–	(39,000)
Cash applied to financing transactions	**–**	**(39,000)**
INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	**18,328**	**(16,549)**
CASH AND CASH EQUIVALENTS – BEGINNING OF PERIOD	14,715	31,340
Unrealized foreign exchange losses for the period	(38)	(76)
CASH AND CASH EQUIVALENTS – END OF PERIOD	**33,005**	**14,715**

Notes to Financial Statements

1. NATURE OF OPERATIONS

a) The Independent Electricity System Operator (IESO) is a not-for-profit, non-taxable, corporation established pursuant to Part II of the *Electricity Act, 1998*. The predecessor Independent Electricity System Operator and the Ontario Power Authority (OPA) were amalgamated by statute effective on January 1, 2015, and continued as the Independent Electricity System Operator. As set out in the *Electricity Act, 1998*, the IESO operates pursuant to a licence granted by the Ontario Energy Board (OEB). The amalgamation was effected pursuant to Bill 14, *Building Opportunity and Securing Our Future Act (Budget Measures), 2014*, which received Royal Assent on July 24, 2014. Schedule 7 of the Bill amended the *Electricity Act, 1998*, by amalgamating the two predecessor corporations and by continuing them as the Independent Electricity System Operator. The transitional provision, dealing with corporate matters, provides, among other things, that the predecessor IESO and OPA cease to exist as entities separate from the amalgamated IESO and all their rights, properties and assets become the rights, properties and assets of the amalgamated IESO, as do all outstanding debts, liabilities and obligations of the predecessor IESO and OPA. Schedule 7 of Bill 14 came into force on January 1, 2015. The objects of the IESO as contained in the *Electricity Act, 1998*, and Ontario Regulation 288/14 are as follows:

- to exercise the powers and perform the duties assigned to it under this Act, the regulations, directions, the market rules and its licence;
- to enter into agreements with transmitters to give it authority to direct the operation of their transmission systems;
- to direct the operation and maintain the reliability of the IESO-controlled grid to promote the purposes of this Act;
- to participate in the development by any standards authority of criteria and standards relating to the reliability of the integrated power system;
- to establish and enforce criteria and standards relating to the reliability of the integrated power system;
- to work with the responsible authorities outside of Ontario to co-ordinate the IESO's activities with the activities of those authorities;
- to operate the IESO-administered markets to promote the purposes of this Act;
- to engage in activities related to contracting for the procurement of electricity supply, electricity capacity and conservation resources;
- to engage in activities related to settlements, payments under a contract entered into under the authority of this Act and payments provided for under this Act or the *Ontario Energy Board Act, 1998*;
- to engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario;
- to forecast electricity demand and the adequacy and reliability of electricity resources for Ontario for the short term, medium term and long term;
- to conduct independent planning for electricity generation, demand management, conservation and transmission;
- to engage in activities to facilitate the diversification of sources of electricity supply by promoting the use of cleaner energy sources and technologies, including alternative energy sources and renewable energy sources;
- to engage in activities in support of system-wide goals for the amount of electricity to be produced from different energy sources;
- to engage in activities that facilitate load management;
- to engage in activities that promote electricity conservation and the efficient use of electricity;
- to assist the Board by facilitating stability in rates for certain types of consumers;
- to collect and make public information relating to the short-term, medium-term and long-term electricity needs of Ontario and the adequacy and reliability of the integrated power system to meet those needs; and
- to engage in such other objects as may be prescribed by the regulations.

b) The IESO was designated the Smart Metering Entity (SME) by Ontario Regulation 393/07 under the *Electricity Act, 1998*, on March 28, 2007. The regulation came into effect on July 26, 2007.

The objects of the Smart Metering Entity, as contained in the *Electricity Act, 1998*, are as follows:

- to plan and implement and, on an ongoing basis, oversee, administer and deliver any part of the smart metering initiative as required by regulation under this or any Act or directive made pursuant to sections 28.3 or 28.4 of the *Ontario Energy Board Act, 1998*, and, if so authorized, to have the exclusive authority to conduct these activities;
- to collect and manage and to facilitate the collection and management of information and data and to store the information and data related to the metering of consumers' consumption or use of electricity in Ontario, including data collected from distributors and, if so authorized, to have the exclusive authority to collect, manage and store the data;
- to establish, to own or lease and to operate one or more databases to facilitate collecting, managing, storing and retrieving smart metering data;
- to provide and promote non-discriminatory access, on appropriate terms and subject to any conditions in its licence relating to the protection of privacy, by distributors, retailers and other persons,
    i. to the information and data referred to above, and
    ii. to the telecommunication system that permits the Smart Metering Entity to transfer data about the consumption or use of electricity to and from its databases, including access to its telecommunication equipment, systems and technology and associated equipment, systems and technologies;
- to own or to lease and to operate equipment, systems and technology, including telecommunication equipment, systems and technology that permit the Smart Metering Entity to transfer data about the consumption or use of electricity to and from its databases, including owning, leasing or operating such equipment, systems and technology and associated equipment, systems and technologies, directly or indirectly, including through one or more subsidiaries, if the Smart Metering Entity is a corporation;
- to engage in such competitive procurement activities as are necessary to fulfill its objects or business activities;
- to procure, as and when necessary, meters, metering equipment, systems and technology and any associated equipment, systems and technologies on behalf of distributors, as an agent or otherwise, directly or indirectly, including through one or more subsidiaries, if the Smart Metering Entity is a corporation;
- to recover, through just and reasonable rates, the costs and an appropriate return approved by the Ontario Energy Board associated with the conduct of its activities; and
- to undertake any other objects that are prescribed by associated regulation.

c) The IESO is required to submit its proposed expenditures, revenue requirements and fees for the coming year to the OEB for review and approval. The submission may be made only with the approval or deemed approval of the IESO business plan by the Minister of Energy (Minister).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) Basis of financial statement preparation

The accompanying financial statements have been prepared on a going concern basis and in accordance with Canadian public sector accounting standards (PSAB) and reflect the following significant accounting policies.

b) Revenue recognition

System fees earned by the IESO are based on approved rates for each megawatt of electricity withdrawn from the IESO-controlled grid (including scheduled exports) and embedded generation. System fees are recognized as revenue at the time the electricity is withdrawn. Rebates are recognized in the year in which the regulatory deferral account, before such rebates, exceeds regulated limits.

For 2015, the system fee for the then newly amalgamated IESO was comprised of the combined rate calculations of the respective pre-amalgamation entities. Specifically, the former IESO rate base was calculated on electricity withdrawn from the IESO-controlled grid (including scheduled exports and embedded generation), whereas the former OPA rate base only considered Ontario electricity consumers. The OEB approved the continued use of this combined rate calculation for 2016 in an interim order issued on December 22, 2015.

These financial statements do not include the revenue and expenses of the financial transactions of market participants within the IESO-administered markets (IAM).

Other revenue represents amounts that accrue to the IESO relating to investment income on funds passing through market settlement accounts, as well as application fees. Such revenue is recognized as it is earned.

Interest and investment income represents realized interest income and investment gains or losses on cash, cash equivalents, short-term investments and long-term investments.

Market sanctions represent funds received to offset payments disbursed related to penalties, damages, fines and payment adjustments arising from resolved settlement disputes.

c) Financial instruments

The IESO records cash and cash equivalents, investment portfolio and foreign currency exchange forward contracts at fair value. The cumulative change in fair value of these financial instruments is recorded in accumulated surplus as remeasurement gains and losses and is included in the value of the respective financial instrument shown in the statement of financial position and the statement of remeasurement gains and losses. Upon disposition of the financial instruments, the cumulative remeasurement gains and losses are reclassified to the statement of operations and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations. Transaction costs are charged to operations as incurred.

Cash and cash equivalents comprise cash, term deposits and other short-term, highly rated investments with original maturity dates of less than 90 days.

The IESO records accounts receivable, accounts payable and debt at amortized cost.

d) Regulated assets and liabilities

As a rate-regulated entity, the IESO, in appropriate circumstances establishes regulated assets or liabilities and thereby defers the impact on the statement of operations of certain expenses or revenues because they are probable to be collected or refunded to market participants through future billings. The IESO has applied guidance from United States Generally Accepted Accounting Principles (US GAAP) Topic 980, *Regulated Operations*, in this policy.

e) Market accounts – assets and liabilities

The IESO records the market accounts assets, liabilities and amounts due to and from market participants held on behalf of the IESO-administered markets in its statements of financial position. The IESO-administered markets is a balancing system, and as such, the net position of market accounts will settle to a $nil balance in accordance with market rules.

f) Tangible capital assets

Tangible capital assets are recorded at cost, which includes all amounts directly attributable to the acquisition, construction, development or betterment of the asset. The IESO capitalizes applicable interest as part of the cost of tangible capital assets.

g) Assets under construction

Assets under construction generally relates to the costs of physical facilities, hardware and software, and includes costs paid to vendors, internal and external labour, consultants and interest related to funds borrowed to finance the project. Costs relating to assets under construction are transferred to tangible capital assets when the asset under construction is deemed to be ready for use.

h) Amortization

The capital cost of tangible capital assets in service is amortized on a straight-line basis over their estimated service lives.

The estimated service lives in years, from the date the assets were acquired, are:

Class	Estimated Average Service Life 2016	Estimated Average Service Life 2015
Facilities	37	37
Market systems and applications	4 to 12	4 to 12
Infrastructure and other assets	4 to 10	4 to 7
Meter data management/repository	10	10

Gains and losses on sales or premature retirements of tangible capital assets are charged to operations.

The estimated service lives of tangible capital assets are subject to periodic review. The effects of changes in the estimated lives are amortized on a prospective basis. The most recent review was completed in fiscal 2016.

i) Pension, other post-employment benefits and compensated absences

The IESO's post-employment benefit programs include pension, group life insurance, health care, long-term disability and workers' compensation benefits.

The IESO accrues obligations under pension and other post-employment benefit (OPEB) plans and the related costs, net of plan assets. Pension and OPEB expenses and obligations are determined annually by independent actuaries using the projected benefit method and management's best estimate of expected return on plan assets, salary escalation, retirement ages of employees, mortality and expected health-care costs. The discount rate used to value liabilities is based on the expected rate of return on plan assets as at the measurement date of September 30.

The expected return on plan assets is based on management's long-term best estimate using a market-related value of plan assets. The market-related value of plan assets is determined using the average value of assets over three years as at the measurement date of September 30.

Pension and OPEB expenses are recorded during the year in which employees render services. Pension and OPEB expenses consist of current service costs, interest expense on liabilities, expected return on plan assets and the cost of plan amendments in the period. Actuarial gains/(losses) arise from, among other things, the difference between the actual rate of return on plan assets for a period and the expected long-term rate of return on plan assets for that period or from changes in actuarial assumptions used to determine the accrued benefit obligations. Actuarial gains/(losses) are amortized over the expected average remaining service life of the employees covered by the plan.

The expected average remaining service life of employees covered by the pension plans is 15 years (2015 – 15 years) and OPEB plan is 16.2 years (2015 – 14.7 years).

The IESO sick pay benefits accumulate but do not vest. The IESO accrues sick pay benefits based on the expectation of future utilization and records the accrual within accounts payable and accrued liabilities.

j) Foreign currency exchange

Transactions denominated in foreign currencies are translated into Canadian dollars at the rate of exchange prevailing on the date of the transaction. Items on the statement of financial position denominated in foreign currency are translated to Canadian dollars at the rate of exchange as of the financial statements date. The cumulative unrealized foreign currency exchange gains and losses of items continuing to be recognized on the statement of financial position are recorded in accumulated deficit as remeasurement gains and losses and shown in the statement of financial position and the statement of remeasurement gains and losses. Upon settlement of the item denominated in a foreign currency, the cumulative remeasurement gains and losses are reclassified to the statement of operations, and all other gains and losses associated with the disposition of the financial instrument are recorded in the statement of operations.

k) Use of estimates

The preparation of the financial statements in conformity with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities and the disclosure of contingent assets and liabilities as at the date of the financial statements. The IESO's accounts that involve a greater degree of uncertainty include the carrying values of tangible capital assets, accrued pension liability and accrual for employee future benefits other than pensions. Actual results could differ from those estimates.

3. NEW ACCOUNTING POLICIES

As of January 1, 2016, the IESO changed its accounting policy regarding the recognition of assets and liabilities subject to rate regulation. The change was made to better reflect the economic substance of certain types of expenses that may not be directly recovered through the normal revenue requirement model. This change has been applied retroactively and has increased amounts previously unrecorded for regulatory assets and decreased amounts previously reported for accumulated deficit.

The IESO recognizes two regulated assets: 1) unrecovered smart metering expenses and 2) unrecovered PSAB transition items.

The smart metering expenses result from the IESO's role as the Smart Metering Entity. As such, the IESO funds its SME operating costs and capital investment in the meter data management/repository (MDM/R) through fees from users of smart meters in Ontario. The OEB approves the Smart Metering Entity charge and the charge is intended to cover the costs of developing and operating the MDM/R.

The unrecovered PSAB transition items result from the IESO's adoption of Canadian public sector accounting standards effective January 1, 2011. The adoption of PSAB was accounted for by retroactive application with restatement of prior periods subject to the requirements in Section PS 2125, *First-time Adoption by Government Organizations*. The corresponding change to pension and other post-employment benefits resulted in previously unrecognized actuarial losses and past service costs of $80,617 thousand at the date of transition.

Regulated assets consist of the following:

As of December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Unrecovered smart metering expenses	21,623	40,849
Unrecovered PSAB transition items	43,441	47,353
Closing balance	**65,064**	**88,202**

In addition, as of January 1, 2016, the IESO changed its accounting policy regarding the recognition of market accounts assets and liabilities on the statement of financial position. The change was made to better reflect the assets and liabilities and amounts due to and from market participants held by the IESO on behalf of the IAM at year end. This change has been applied retroactively and has increased amounts previously unrecorded for market accounts assets and liabilities. There is no impact to the accumulated deficit or revenues and expenses as the IESO is not party to these transactions as per the market rules.

Components of the market accounts are as follows:

As of December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Cash, restricted for market activities	244,755	271,574
Amounts due from market participants	1,391,260	1,171,389
Interest receivable	186	158
Revolving line of credit	(150,501)	(12,739)
HST receivable	25,531	20,247
Amounts due to market participants	(1,392,643)	(1,380,086)
Other liabilities	(118,588)	(70,543)
Closing balance	**–**	**–**

Comparative figures

A detailed reconciliation of the IESO's restated statement of financial position as at December 31, 2015, as follows:

As of (in thousands of Canadian dollars)	December 31, 2015 (as reported) $	December 31, 2015 adjustments $	December 31, 2015 (as restated) $
FINANCIAL ASSETS			
Cash and cash equivalents	14,715	–	14,715
Accounts receivable	33,199	–	33,199
Long-term investments	37,318	–	37,318
Regulated assets	–	88,202	88,202
Market accounts – assets	–	1,443,121	1,443,121
TOTAL FINANCIAL ASSETS	**85,232**	**1,531,323**	**1,616,555**
LIABILITIES			
Accounts payable and accrued liabilities	48,868	–	48,868
Accrued interest on debt	315	–	315
Rebates due to market participants	9,595	–	9,595
Debt	90,000	–	90,000
Accrued pension liability	36,062	–	36,062
Accrued liability for employee future benefits other than pension	84,501	–	84,501
Market accounts – liabilities	–	1,443,121	1,443,121
TOTAL LIABILITIES	**269,341**	**1,443,121**	**1,712,462**
NET DEBT	**(184,109)**	**88,202**	**(95,907)**
NON-FINANCIAL ASSETS			
Net tangible capital assets	103,716	–	103,716
Prepaid expenses	6,197	–	6,197
TOTAL NON-FINANCIAL ASSETS	**109,913**	**–**	**109,913**
ACCUMULATED SURPLUS/(DEFICIT)			
Accumulated surplus/(deficit) from operations	(81,854)	88,202	6,348
Accumulated remeasurement gains	7,658	–	7,658
ACCUMULATED SURPLUS/(DEFICIT)	**(74,196)**	**88,202**	**14,006**

A detailed reconciliation of the IESO's restated statement of operations for the year ended December 31, 2015, is as follows:

For the year ended (in thousands of Canadian dollars)	December 31, 2015 (as reported) $	December 31, 2015 adjustments $	December 31, 2015 (as restated) $
IESO CORE OPERATIONS			
System fees	190,099	(3,912)	186,187
Other revenue	5,377	–	5,377
Interest and investment income	1,430	–	1,430
Core operations revenues	**196,906**	**(3,912)**	**192,994**
Compensation and benefits	(104,994)	–	(104.994)
Professional and consulting	(21,461)	–	(21,461)
Operating and administration	(35,005)	–	(35,005)
Core operating expenses	**(161,460)**	**–**	**(161,460)**
Amortization	(17,933)	–	(17,933)
Interest	(1,610)	–	(1,610)
Core expenses	**(181,003)**	**–**	**(181,003)**
Core operations annual surplus before rebates	**15,903**	**(3,912)**	**11,991**
Rebates due to market participants	(9,595)	–	(9,595)
Core operations annual surplus	**6,308**	**(3,912)**	**2,396**
MARKET SANCTIONS AND PAYMENT ADJUSTMENTS			
Market sanctions and payment adjustment	6,021	–	6,021
Compensation and benefits	(3,094)	–	(3,094)
Professional and consulting	(1,351)	–	(1,351)
Operating and administrative	(114)	–	(114)
Customer education and market enforcement expenses	**(4,559)**	**–**	**(4,559)**
Market sanctions and payment adjustments annual surplus	**1,462**	**–**	**1,462**
SMART METERING ENTITY			
Smart metering charge	**46,215**	**(20,030)**	**26,185**
Compensation and benefits	(2,607)	–	(2,607)
Professional and consulting	(14,902)	–	(14,902)
Operating and administration	(4,200)	–	(4,200)
Smart metering operating expenses	**(21,709)**	**–**	**(21,709)**
Amortization	(3,524)	–	(3,524)
Interest	(952)	–	(952)
Smart metering expenses	**(26,185)**	**–**	**(26,185)**
Smart metering entity annual surplus	**20,030**	**(20,030)**	**–**
ANNUAL SURPLUS	**27,800**	**(23,942)**	**3,858**
ACCUMULATED SURPLUS/(DEFICIT) FROM OPERATIONS, BEGINNING OF PERIOD	(109,654)	112,144	2,490
ACCUMULATED SURPLUS/(DEFICIT) FROM OPERATIONS, END OF PERIOD	**(81,854)**	**88,202**	**6,348**

4. LONG-TERM INVESTMENTS

Long-term investments in a balanced portfolio of pooled funds are valued by the pooled funds manager based on published price quotations and amount to $39,972 thousand (2015 – $37,019 thousand). As at December 31, the market value allocation of these long-term investments was 62.3% equity securities and 37.7% debt securities (2015 – 56.0% and 44.0% respectively).

Balanced portfolio of pooled funds

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Opening balance	37,019	33,758
Net purchase of investments	2,667	1,889
Change in fair value	286	1,372
Closing balance	**39,972**	**37,019**

In addition to the balanced portfolio of pooled funds, the IESO has a long-term deposit with Canada Revenue Agency in the amount of $383 thousand (2015 – $299 thousand) pertaining to the Retirement Compensation Arrangements Trust (Note 7).

5. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Relating to operations	35,630	43,125
Relating to tangible capital assets	3,333	5,743
Closing balance	**38,963**	**48,868**

6. REBATES DUE TO MARKET PARTICIPANTS AND ACCUMULATED SURPLUS

In 2016, the IESO recognized $12,551 thousand in rebates due to market participants of system fees (2015 – $9,595). As at December 31, 2016, rebates due to market participants were $22,146 thousand, with the 2015 portion of $9,595 thousand rebated in January 2017.

The IESO's approved regulatory deferral account balance has been historically maintained at a maximum of $10.0 million. The 2016 approved regulatory deferral account balance at $10.0 million was approved by the OEB on December 1, 2016.

Prior to 2014, unrealized gains and losses from portfolio investments and foreign exchange were included in the balance of the regulatory deferral account (life-to-date total $4,144 thousand). As of January 1, 2014, only realized gains and losses are included in this balance.

As at December 31, the components of the accumulated surplus were as follows:

Accumulated Surplus

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Regulatory deferral account (a)	10,000	10,000
Accumulated market sanctions and payment adjustments (b)	726	492
Remeasurement gains	3,762	3,514
Accumulated surplus – end of year	**14,488**	**14,006**

a) Regulatory Deferral Account

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Accumulated surplus – beginning of year	10,000	7,604
Revenues (before rebates due to market participants)	190,219	192,994
Rebates due to market participants	(12,551)	(9,595)
Core operation expenses	(177,668)	(181,003)
Accumulated surplus – end of year	**10,000**	**10,000**

b) Accumulated Market Sanctions and Payment Adjustments

As at December 31 (in thousands of Canadian dollars)	2016	2015
	$	$
Accumulated surplus/(deficit) – beginning of year	492	(970)
Market sanctions and payment adjustments	3,889	6,021
Customer education and market enforcement expenses	(3,655)	(4,559)
Accumulated surplus – end of year	**726**	**492**

7. DEBT

Note payable to Ontario Electricity Financial Corporation (OEFC)

In April 2014, the IESO entered into a three-year note payable with the OEFC. The note payable is unsecured, bears interest at a fixed rate of 2.046% per annum and is repayable in full on April 30, 2017. Interest accrues daily and is payable in arrears semi-annually in April and October of each year. As at December 31, 2016, the note payable to the OEFC was $90.0 million (December 31, 2015 – $90.0 million).

For the year ended December 31, 2016, the interest expense on the note payable was $1,841 thousand (2015 – $1,841 thousand).

Credit facility

The IESO has an unsecured credit facility agreement with the OEFC, which will make available to the IESO an amount up to $95.0 million. Advances are payable at a variable interest rate equal to the Province of Ontario's cost of borrowing for a 30-day term plus 0.50% per annum, with draws, repayments and interest payments due monthly. The credit facility expires April 30, 2017. As at December 31, 2016, no amount was drawn on the credit facility (December 31, 2015 – $nil).

For the year ended December 31, 2016, the interest expense on the credit facility was $nil (2015 – $279 thousand).

Retirement Compensation Arrangements Trust

In July 2013, the IESO established a Retirement Compensation Arrangements (RCA) Trust to provide security for the IESO's obligations under the terms of the supplemental employee retirement plan for its employees. As at December 31, 2016, the IESO has provided the RCA trustee with a bank letter of credit of $30,466 thousand (2015 – $28,408 thousand) the trustee can draw on if the IESO is in default under the terms of this plan.

8. POST-EMPLOYMENT BENEFIT PLANS

The IESO provides pension and other employee post-employment benefits, comprising group life insurance, long-term disability and group medical and dental plans, for the benefit of current and retired employees.

Pension plans

The IESO provides a contributory defined benefit, indexed, registered pension plan. In addition to the funded, registered pension plan, the IESO provides certain non-registered defined benefit pensions through an unfunded, indexed, non-registered plan.

Other employee future benefits

The group life insurance, long-term disability and group medical and dental benefits are provided through unfunded, non-registered defined benefit plans.

Summary of accrued benefit obligations and plan assets

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Accrued benefit obligation	507,724	482,994	91,014	83,455
Fair value of plan assets	523,756	475,714	–	–
Funded status as of measurement date	16,032	(7,280)	(91,014)	(83,455)
Employer contribution/other benefits payments after measurement date	2,416	427	588	582
Unrecognized actuarial (gain)/loss	(53,068)	(29,209)	175	(1,628)
Accrued liability recognized in the statement of financial position	**(34,620)**	**(36,062)**	**(90,251)**	**(84,501)**

Registered pension plan assets

As at the measurement date of September 30, the proportion of the fair value of registered pension plan assets held in each asset class was as follows:

	2016	2015
Canadian equity securities	20.2%	19.9%
Foreign equity securities	39.9%	41.8%
Canadian debt securities	39.8%	39.0%
Cash equivalents	0.4%	0.6%
Forward foreign exchange contracts	(0.3%)	(1.3%)
	100.0%	**100.0%**

Principal assumptions used to calculate benefit obligations at the end of the year are determined at that time and are as follows:

	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
Discount rate at the end of the period	5.75%	6.00%	5.75%	6.00%
Rate of compensation increase	3.50%	3.75%	3.50%	3.75%
Rate of indexing	2.00%	2.25%	2.00%	2.25%

The assumed prescription drug inflation was 8.00% for 2016, grading down to an ultimate rate 4.50% per year in 2030. Dental costs are assumed to increase by 4.00% per year.

Benefit costs and plan contributions for pension and other plans are summarized as follows:

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Current service cost (employer)	11,117	10,547	3,107	2,857
Interest cost	29,292	28,143	5,120	4,797
Expected return on plan assets	(27,626)	(26,053)	–	–
Amortization of net actuarial loss	(1,173)	(667)	(100)	(753)
Benefit cost	**11,610**	**11,970**	**8,127**	**6,901**

(in thousands of Canadian dollars)	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
	$	$	$	$
Employer contribution/other benefit payments	13,052	12,851	2,377	2,314
Plan participants' contributions	5,811	5,162	–	–
Benefits paid	23,317	21,155	2,377	2,314

The most recent actuarial valuation of the registered pension plan for funding purposes was at January 1, 2014, and the next required valuation is to be effective January 1, 2017.

Principal assumptions used to calculate benefit costs for the year are determined at the beginning of the period and are as follows:

	2016 Pension Benefits	2015 Pension Benefits	2016 Other Benefits	2015 Other Benefits
Discount rate at the beginning of the period	6.00%	6.15%	6.00%	6.15%
Rate of compensation increase	3.75%	3.75%	3.75%	3.75%
Rate of indexing	2.25%	2.25%	2.25%	2.25%

9. TANGIBLE CAPITAL ASSETS

Net tangible capital assets consist of the following:

Tangible Capital Assets

(in thousands of Canadian dollars)	As at December 31, 2015	Additions	Disposals	As at December 31, 2016
	$	$	$	$
Facilities	52,281	3,692	–	55,973
Market systems and applications	278,458	28,535	–	306,993
Infrastructure and other assets	60,180	3,175	–	63,355
Meter data management/repository	35,900	1,011	–	36,911
Total cost	**426,819**	**36,413**	**–**	**463,232**

Accumulated Amortization

(in thousands of Canadian dollars)	As at December 31, 2015	Amortization Expense	Disposals	As at December 31, 2016
	$	$	$	$
Facilities	(22,604)	(1,697)	–	(24,301)
Market systems and applications	(251,210)	(12,336)	–	(263,546)
Infrastructure and other assets	(47,228)	(5,544)	–	(52,772)
Meter data management/repository	(25,329)	(3,861)	–	(29,190)
Total accumulated amortization	**(346,371)**	**(23,438)**	**–**	**(369,809)**

Net Book Value

(in thousands of Canadian dollars)	As at December 31, 2015	As at December 31, 2016
	$	$
Facilities	29,677	31,672
Market systems and applications	27,248	43,447
Infrastructure and other assets	12,952	10,583
Meter data management/repository	10,571	7,721
Total net book value	**80,448**	**93,423**
Assets under construction	23,268	11,624
Net tangible capital assets	**103,716**	**105,047**

In 2016, there were no adjustments to management's estimates of remaining asset service lives (2015 – decrease of $653 thousand).

Interest capitalized to assets under construction during 2016 was $260 thousand (2015 – $263 thousand).

10. OTHER REVENUE

In its administration of the IESO-administered markets, the IESO directs the investment of market funds in highly rated, short-term investments throughout the settlement cycle. The IESO is entitled to receive the investment interest and investment gains, net of investment losses earned on funds passing through the real-time market settlement accounts. The IESO is not entitled to the principal on real-time market investments.

The IESO recognized investment income earned in the market settlement accounts of $2,508 thousand in 2016 (2015 – $3,212 thousand).

11. RELATED PARTY TRANSACTIONS

The Province of Ontario is a related party as it is the controlling entity of the IESO. The OEFC, OEB, Hydro One and Ontario Power Generation Inc. (OPG) are related parties of the IESO, through the common control of the Province of Ontario. Transactions between these parties and the IESO were as follows:

The IESO holds a note payable and an unsecured credit facility agreement with the OEFC (Note 7). Interest payments made by the IESO in 2016 for the note payable were $1,841 thousand (2015 – $1,841 thousand) and for the credit facility were $nil (2015 – $328 thousand). As of December 31, 2016, the IESO had an accrued interest payable balance with the OEFC of $315 thousand (2015 – $315 thousand).

Under the *Ontario Energy Board Act, 1998*, the IESO incurs registration and license fees. The total of the transactions with the OEB was $1,747 thousand in 2016 (2015 – $1,671 thousand).

The IESO performed connection and bulk electric system exception assessments for Hydro One in 2016. In 2016, the IESO invoiced Hydro One $610 thousand (2015 – $310 thousand).

The IESO procures short circuit studies and protection impact assessments as part of connection assessments, approvals and meter services on IESO-owned interconnected revenue meters from Hydro One. Additionally, the IESO paid Hydro One for the removal of the microwave tower at the Clarkson location. In 2016, the IESO incurred costs of $188 thousand (2015 – $525 thousand) for these services. As of December 31, 2016, the IESO had a net payable balance with Hydro One of $4 thousand (2015 – $149 thousand).

The IESO performed connection assessment and approvals for OPG, administered telecommunication services to market participants to connect to the real-time market systems and provides market-related training courses. In 2016, OPG was invoiced $124 thousand (2015 – $137 thousand). As of December 31, 2016, the IESO had a net receivable balance with OPG of $5 thousand (2015 – $4 thousand).

12. FINANCIAL RISK MANAGEMENT

The IESO is exposed to financial risks in the normal course of its business operations, including market risks resulting from volatilities in equity, debt and foreign currency exchange markets, as well as credit risk and liquidity risk. The nature of the financial risks and the IESO's strategy for managing these risks have not changed significantly from the prior year.

a) Market Risk

Market risk refers to the risk that the fair value or future cash flows of a financial instrument will fluctuate to cause changes in market prices. The IESO is primarily exposed to three types of market risk: currency risk, interest rate risk and equity risk. The IESO monitors its exposure to market risk fluctuations and may use financial instruments to manage these risks as it considers appropriate. The IESO does not use derivative instruments for trading or speculative purposes.

i) Currency Risk

The IESO conducts certain transactions in U.S. dollars, primarily related to vendors' payments, and maintains a U.S. dollar-denominated bank account. From time to time, the IESO may utilize forward purchase contracts to purchase U.S. dollars for delivery at a specified date in the future at a fixed exchange rate. In addition, the IESO utilizes U.S. dollar spot rate purchases in order to satisfy any current accounts. As at December 31, 2016, the IESO did not have any outstanding forward purchase contracts.

ii) Interest Rate Risk

The IESO is exposed to movements or changes in interest rates primarily through its short-term variable rate credit facility, cash equivalents' securities and long-term investments. Long-term investments include investments in a pooled Canadian bond fund. The potential impact to the securities' value had the prevailing interest rates changed by 25 basis points, assuming a parallel shift in the yield curve with all other variables held constant, is estimated at $0.6 million as at December 31, 2016 (2015 – $0.6 million).

iii) Equity Risk

The IESO is exposed to changes in equity prices through its long-term investments. Long-term investments include investments in pooled equity funds. A 30% change in the valuation of equities as at December 31, 2016, would have resulted in a change for the year of approximately $7.5 million (2015 – $6.8 million). The fair values of all financial instruments measured at fair value are derived from quoted prices (unadjusted) in active markets for identical assets.

b) Credit Risk

Credit risk refers to the risk that one party to a financial instrument may cause a financial loss for the other party by failing to meet its obligations under the terms of the financial instrument. The IESO is exposed directly to credit risk related to cash equivalents' securities and accounts receivable, and indirectly through its exposure to the long-term investments in a Canadian bond pooled fund. The IESO manages credit risk associated with cash equivalents' securities through an approved management policy that limits investments to primarily investment-grade investments with counterparty-specific limits. The accounts receivable balance as at December 31, 2016, included no material items past due and substantially all of the balance was collected within 30 days from December 31, 2016. The long-term Canadian bond pooled fund is comprised of primarily investment-grade securities.

c) Liquidity Risk

Liquidity risk refers to the risk that the IESO will encounter financial difficulty in meeting obligations associated with its financial liabilities when due. The IESO manages liquidity risk by forecasting cash flows to identify cash flows and financing requirements. Cash flows from operations, short-term investments, long-term investments and maintaining appropriate credit facilities help to reduce liquidity risk. The IESO's long-term investments are normally able to be redeemed within three business days; however, the investment manager of the pooled funds has the authority to require a redemption in-kind rather than cash and has the ability to suspend redemptions if deemed necessary.

13. COMMITMENTS

Operating commitments

The obligations of the IESO with respect to non-cancellable operating leases over the next four years are as follows:

As at December 31 (thousands of Canadian dollars)

	$
2017	5,489
2018	5,004
2019	3,919
2020	3,195

14. CONTINGENCIES

The IESO is subject to various claims, legal actions and investigations that arise in the normal course of business. While the final outcome of such matters cannot be predicted with certainty, management believes that the resolution of such claims, actions and investigations will not have a material impact on the IESO's financial position or results of operations.

15. COMPARATIVE FIGURES

Certain comparative figures have been reclassified to conform with the financial statement presentation adopted in 2016.

Executive Compensation at the IESO

Program Objectives

The IESO compensation program for executives was designed to attract, retain and motivate the calibre of executives required to support the achievement of the IESO's statutory mandate, business objectives and corporate vision. Accordingly, the compensation philosophy and programs were built on the following objectives:

- to focus executives on meeting the IESO's business objectives
- to attract and retain qualified and talented staff needed to carry out the IESO's mandate
- to have the flexibility to reward results and demonstrated competencies
- to have compensation levels that are appropriate and defensible to stakeholders and customers.

The philosophy underlying these objectives is that total compensation for executives should be adequate enough to attract and retain the skills and competencies necessary to carry out the IESO's mandate.

Program Governance

The IESO Board establishes the compensation objectives for the following year's program. They delegate the responsibility to thoroughly review the compensation objectives, policies and programs to the Human Resources and Governance Committee (HRGC) of the Board, which make recommendations to the full Board for approval.

The Board is comprised of 10 independent, external Board members, appointed by the Minister of Energy, with broad experience in the electricity industry and public sector organizations, and the President and Chief Executive Officer of the IESO. Their experience includes many years of dealing with human resource matters including the setting and implementation of compensation policies and programs.

In carrying out their mandate, the Board members have access to management's analysis and recommendations as well as those of expert consultants in the compensation field. These programs are reviewed annually with regard to business needs, program objectives and design, industry compensation trends, internal compensation relativities and external market relativities.

The Board also assesses risks associated with the establishment and implementation of compensation policies and programs. Annually the Board presides over and approves the IESO's business plan. An important component of this process is consideration of, and the implementation of, mitigating actions associated with enterprise risk management. This latter overarching process includes the assessment of all significant risks to the IESO, including risks associated with its compensation policies and programs.

In addition to the formal governance and oversight structure in place for compensation matters, the IESO discloses compensation levels annually for staff earning $100,000 or more as part of its public sector salary disclosure. For the IESO, a further level of public review and assurance is provided through a statutorily required annual review of the IESO's expenditures, revenue requirements and fees. Information related to compensation matters, including executive/management compensation and market relativities, is subject to the Ontario Energy Board review. A range of small and large consumers, assisted by their legal and professional advisors, are represented in these public proceedings.

Market Comparisons

The IESO reviews the competitiveness of the executive compensation levels in relation to a peer group of Canadian organizations and general industry companies every other year at a minimum. The objective is to compare IESO executive compensation levels to those in the marketplace particularly in relation to the median of the market.

Prior to the amalgamation of the IESO with the OPA, the Ministry of Energy had retained the Hay Group, a global management consulting firm, to evaluate and market price the CEO position for the new organization. Following Mr. Campbell's appointment to the CEO position on January 1, 2015, the decision was made to adopt a similar approach to evaluate and market price all other executive roles using the Hay point system.

As part of this process, the comparator group was redefined consistent with the recommendations of the Agency Review Panel (the Arnett report) and is comprised of 13 public sector and 11 private sector organizations, with the comparator data weighted on a 50/50 public/private sector basis. The comparator group represents a range of industries, core business activities and roles that are similar to IESO: electricity, energy, asset management, financial services, infrastructure procurement, engineering and large-scale, complex IT functions. The list of organizations can be viewed in the 2015 Annual Report.

The Broader Public Sector Executive Compensation Framework regulation (O. Reg 304/16) came into force in 2016 for implementation in 2017. The IESO's executive compensation program will be reviewed in accordance with this regulation and made available on the IESO's website by September 2017.

The job evaluation was independently conducted by the Hay Group using its point system and the following executive positions were covered by this review:

- President & CEO
- VP Corporate Services & CFO
- VP Market & Resource Development
- VP Market & System Operations & COO
- VP Conservation & Corporate Relations
- VP Information and Technology Services and CIO
- VP Planning, Law & Aboriginal Relations.

The Hay Group evaluated the Vice-President positions based on the job documents and additional information gathered from the CEO. Based on the evaluation points, a new salary structure was developed. The executive positions were then mapped into the new structure based upon their evaluated points.

Using the market information from the above peer group, the mid-point of the range of points for each executive salary grade was determined as the market price point for comparison purposes.

The mid-points of the new salary ranges were defined as the total direct cash compensation (annual base salaries plus annual short-term and long-term target incentive awards) of the hybrid market's price point at the 50th percentile for each salary grade.

The minimums and maximums of each salary range were calculated using typical salary range spreads at executive levels. In accordance with the *Broader Public Sector Accountability Act* (2010), executive compensation rates have remained the same in 2016 and will be reviewed against the Executive Compensation Framework regulation in 2017.

Program Description

The IESO program includes fixed and variable compensation, core and flex benefit plans, and pension provisions. IESO Human Resources staff participate in and review results from various compensation surveys and monitor economic trends, such as inflation and unemployment rates, which impact on compensation, as well as internal compensation relativities. Based on this data and the IESO business priorities, Human Resources staff develop recommendations on compensation programs. External specialized compensation, benefit and pension consultants are utilized to ensure accurate, representative market compensation data is obtained, that current industry compensation trends are being utilized, as well as provide insight and recommended adjustments to current programs.

Program Description – Fixed Compensation

Within the IESO salary ranges, individuals are assessed relative to an established competency model. This model consists of behavioural competencies such as strategic agility, building effective teams, command skills, sizing up people, political savvy and managing vision and purpose. Assessments are based upon demonstrated competency. Each individual is awarded a fixed compensation level within his or her band based upon his or her assessed competency.

Program Description – Variable Compensation

In order to promote a results orientation in the executive team, the variable pay plan forms part of the total compensation of executives. The IESO Board annually establishes a robust set of performance measures, which are evaluated each year.

The IESO Board assesses the corporate performance results and the CEO's individual performance results. Under the plan, having assessed the results against target, the Board has the ability to use some discretion in determining the final performance rating – however in the past, apart from one occasion, the Board has relied upon the directly assessed results to award variable compensation.

The variable compensation award for the CEO and Vice-Presidents is capped at 10% of fixed compensation. The plan provides for awards below the capped amount depending on the performance results achieved. The 2016 annual award was paid on December 30, 2016.

Program Description – Group Benefits

The group benefit plan provides a core level of health and dental benefits, life insurance, disability coverage and vacation, which can be adjusted by individual executives through a flexible component within the plan. The flexible element provides executives the option of adjusting their benefits to meet their individual/family needs, including vacation above core amounts, levels of life insurance, health coverage and other components.

Program Description – Pension Plan

A defined benefit pension plan provides annual retirement income calculated as 2% of pensionable earnings during the highest paid 60 consecutive months of service multiplied by years of service (36 months for the pension earned prior to January 1, 2017, by the former IESO executives), to a maximum of 35 years. The pension formula is integrated with the Canada Pension Plan (CPP) to provide a level income stream before and after age 65, when the IESO pension is reduced to reflect benefits from CPP. The plan also has early retirement provisions as well as commuted value, pension deferral and reciprocal transfer options.

The plan provides a maximum benefit of 70% of highest paid, pre-retirement pensionable earnings. As the Canadian Revenue Agency limits the amount of pension payable from a registered plan, the IESO has a secured supplemental employee retirement plan to provide required pension income to meet the commitments of the plan above that payable from the registered plan.

The plan also provides several options including member's life only or joint and survivor pensions, as well as pre-retirement death benefits to provide benefits to surviving spouses or beneficiaries.

Performance Measures & Impact on Compensation

The IESO annually establishes corporate performance measures relating to its business priorities during the business planning process. These are approved, monitored and assessed by the IESO Board of Directors each year. Individual performance measures supporting one or more corporate performance measures are also developed for each executive. As outlined above, the corporate results achieved each year impact on each executive's variable pay.

For 2016, the Board assessed the corporate results and determined that the IESO met all expectations. In addition to the corporate measures, each executive also had an individual set of measures and targets for the year, which aligned with the corporate performance objectives and IESO's business priorities, and these were similarly assessed. The Board assessed the results of the CEO's performance and the CEO assessed the performance of the Vice-Presidents, which were also reviewed with the Board.

Other Considerations

Compensation decisions may at times be impacted by market factors – such as the recruitment of an executive with specialized skills/competencies or possessing unique talents within the industry. To this end, individual incumbent arrangements are sometimes established relating to terms of employment and the possibility of future termination.

The VP Market & Systems Operations and COO retired in December 2016 and was replaced by an internal senior-level employee after a thorough internal and external search was completed.

Compensation Restraints

The IESO executive compensation has been significantly impacted by the compensation restraint legislation in Ontario since 2010. The *Broader Public Sector Accountability Act* (BPSAA) imposes a general freeze on designated executives' salary, variable pay, benefits and perquisites subject to very limited exceptions.

Following the amalgamation of the two former organizations (IESO and OPA) on January 1, 2015, the total 2015 variable performance pay amount awarded to all employees and office holders became the cap for total variable performance pay to be paid out in future years as long as the BPSAA remains in effect. The total variable compensation paid in 2016 was within this maximum.

Executive Compensation Structure Alignment

With the appointment on January 1, 2015, of Mr. Campbell as the CEO of the merged organization, the IESO aligned the compensation plan for its Vice-Presidents with the structure established for the new CEO. Accordingly, in both cases, the variable pay component was capped at 10% of fixed compensation with no deferral. There were no salary adjustments for executives in 2016. .

The figures reported as 2016 "Salary Paid" in the 2016 Public Sector Salary Disclosure for the executives include the 2016 earned variable compensation that was paid on December 30, 2016.

Executive Compensation Statement

The table below details the annual compensation for the year ended December 30, 2016, for the executives listed.

2016 Summary Compensation Table

Name & Position	Base Salary	Variable Pay[1]	Other Annual Compensation[2]	Total Cash Compensation[3]
Bruce Campbell President & CEO	$536,364	$53,636	$32,527	$622,527
Kimberly Marshall VP Corporate Services & CFO	$268,460	$13,423	$5,305	$287,188
JoAnne Butler VP Market & Resource Development	$339,968	$30,600	$1,037	$371,605
Kim Warren *(retired Dec. 31, 2016)* VP Market & System Operations & COO	$319,228	$30,330	$15,893	$365,451
Terence Young VP Conservation & Corporate Relations	$307,037	$29,170	$22,065	$358,272

1. 2016 earned variable compensation was paid in December 2016
2. Represents remaining flex credits paid out at year end as taxable income
3. These amounts will be reported as "Salary Paid" under the Annual Public Sector Salary Disclosure

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ieso
Connecting Today.
Powering Tomorrow.

From: Nelms, Scott (MOF)
To: ASHBOURNE, STEPHEN; Mike Manning
Subject: Key points / questions
Date: Monday, March 27, 2017 8:33:19 AM

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity rates by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts.
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principle, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- the Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- Province is involved in developing legislation, regulation and other policies to enable this structure
- A key objective for the Province is to ensure that this structure is financiable with as little support / backstop as possible from the Government
- the Province is seeking outside expertise to help review the proposed structure and legislative requirements provided by OPG and its advisors
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms particularly involving the public sector?
4) who (or what team) would you suggest as advisors to the Province for this engagement and why?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com)

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To: ASHBOURNE, STEPHEN; Mike Manning
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Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Christina Zhang
To: Gadi Mayman
Cc: Mike Manning; Ken Kandeepan
Subject: Latest SCOPA Materials
Date: Monday, October 03, 2016 6:11:04 PM
Attachments: Friendly QAs_Moodys.docx
Gadi Maymans Speaking Points CSB edits_Oct 3 2016 5pm.docx
MOF QAs_Oct 3 2016 6pm.docx

Hi Gadi,
Very, very sorry for sending you these on Rosh Hashanah. Please treat these as FYI, unless you have comments of course. =)
Please find attached the latest materials for SCOPA, including your updated remarks and a couple of friendly Q&As on the Moody's report, as requested by DMO. I've also attached the general Q&As (updated with the September 30th borrowing numbers).
There's a joint MO/DM briefing on SCOPA tomorrow at noon, which Ken will likely attend. Thanks very much to Mike and Ken for all their assistance today. Ken had kindly updated your remarks to reflect the September 30th borrowing numbers, the Moody's report and today's release of the unaudited FS.
Have a great evening and hope you're having wonderful celebration with your family.
Regards,
Christina

From: Christina Zhang
Sent: Monday, October 03, 2016 5:24 PM
To: Mike Manning ; Ken Kandeepan
Subject: FW: Latest SCOPA Comms Products
Hi there,
FYI. DMO has confirmed that we're to keep SCOPA Q&As as is and that there's no need to update based on today's release of the unaudited consolidated financial statements. That said, I'll review and update the borrowing numbers as of September 30th. Because of the delay in SCOPA, all our borrowing numbers were as of August 31th.
In the meantime, I'll planning to share the two documents with DMO as drafts. One is Gadi's remarks (which Ken kindly reviewed and updated) and the proposed friendlies by Bonnie.
Once I've updated the Q&As, I'll send all three items to Gadi as well as a FYI. Just very reluctant to send him anything during his holiday.
Thank you,
Christina

From: Ize-Dukuze, Marilyn (MOF) [mailto:Marilyn.Ize-Dukuze@ontario.ca]
Sent: Monday, October 03, 2016 5:12 PM
To: Tara McGrath (MOF) <Tara.McGrath@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
Cc: Christina Zhang <Christina.Zhang@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>
Subject: RE: Latest SCOPA Comms Products
Hi both –
SCOPA is still very much about the 2014-15 PA, thus current QAs do not need updating. However, additional QAs reflecting 2015-16 PA release are also now

required. For this, we are asking TBS to share the QA package that was put together (with MOF input) for the 2015-16 PA release. This would be added to the SCOPA binders in addition to the QAs on 2014-15 PA.
Following up on strategy for remarks.
Thanks,
Marilyn Ize-Dukuze | ph. 416.326.8529 | bb. 416.302.3609

Q: Moody's just released a report noting that Ontario's debt burden and debt service costs will remain manageable thanks to low interest rates, as well as the province's improving fiscal position and conservative debt management policy. Can you explain how your conservative debt management policies are keeping debt service costs manageable?

A: Investor demand has allowed the Province to extend the term of its debt in recent years and lock in low interest rates for a longer period. This term extension reduces the Province's refinancing risks and helps offset the impact of expected higher interest rates on its IOD costs.

The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 23 per cent lower, at only 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Q: Moody's just released a report noting that Ontario's policy decision to borrow for infrastructure spending at a time of historically low interest rates, combined with the prudent debt management practices has helped to support the province's Aa2 rating. Can you explain how borrowing for infrastructure helps support the province's credit rating?

A: We are making the biggest investment in public infrastructure in Ontario's history. We have a plan to invest more than $137 billion over the next 10 years, or about $160 billion over 12 years, starting in 2014–15. This is a strategic investment will grow the economy and create jobs.

Our plan is to first balance the budget while continuing to make strategic investments in capital assets. These infrastructure investments will stimulate economic growth, resulting in GDP growing more quickly than debt, and thereby lowering the net debt-to-GDP ratio.

With capital investments, the net debt-to-GDP ratio will come down more quickly than it would have without these investments in capital assets.

Capital investments are amortized over the useful life of the assets. Once a balanced budget is achieved, the increase in debt will be limited to the difference between the cash investment to build assets, and the amortization, which is a non-cash amount.

This historic investment in public infrastructure is critical to Ontario – today and tomorrow. From an economic perspective – these infrastructure investments will certainly pay off. Our investments will support an average of 110,000 jobs per year in Ontario, as well as creating significant GDP growth.

Remarks by Gadi Mayman

CEO

Ontario Financing Authority

to the Standing Committee

on Public Accounts

Toronto, Ontario

~~September 21~~October 5, 2016

Word count: ~~740~~

Check against Delivery

Thank you, Deputy Minister Thompson and Deputy Minister Orencsak.

Good afternoon.

My name is Gadi Mayman, and I am the Chief Executive Officer of the Ontario Financing Authority.

In this role, I am responsible for overseeing Ontario's:

- borrowing and debt management strategy;
- corporate and electricity finance projects and;
- banking relationships.

I also manage the province's relationships with credit rating agencies, bond underwriters and investors.

Before I continue, I would like to thank the committee for the opportunity to discuss what we have been doing to address the points raised by the Auditor General regarding Ontario's debt.

[Net debt]

~~Ontario's net debt-to-GDP is expected to peak at 39.6 per cent in 2015–16.~~

~~This compares to the forecast of:~~

- ~~39.8 per cent in the 2015 Budget;~~
- ~~40.8 per cent in the 2014 Budget and;~~
- ~~40.4 per cent in the 2013 Budget.~~

~~We expect Ontario's net debt-to-GDP ratio to remain unchanged at 39.6 per cent in 2016–17, and decline further in 2017–18.~~

The government is committed towards ~~target continues to be to~~ reducinge the net debt-to-GDP ratio to its pre-recession level.

A government's net debt increases primarily for two reasons: to finance its deficits and invest in capital assets.

In the first few years after the global recession in 2008–09, the increase in the province's net debt was primarily due to Ontario's deficit. Over this period the Government continued investing in much needed improvements to the Province's capital infrastructure.

The government plans to invest more than $137-billion in capital over 10 years, and $160 billion over the 12-year period starting in 2014-15.

Investments in capital, supplement GDP growth and the net debt-to-GDP ratio will come down more quickly than it would without these investments.

Once a balanced budget is achieved, the increase in net debt will be limited to difference between the cash investment to build the assets and the amortization, which is a non-cash amount.
~~Ontario's deliberate choice to invest in the economy during the recession did increase the deficit, but also resulted in Ontario experiencing the recession less harshly than we might have otherwise.~~

~~The strategy was successful-- the economy rebounded and since then, the government has been committed to eliminating the deficit by 2017–18, and remaining balanced in 2018–19.~~

~~Once balance is achieved, the increase in Ontario's net debt will be limited to its net investment in tangible capital assets.~~

This means that achieving balance will put net debt-to-GDP on a declining track.

Moody's notes in a report issued October 3, 2016 that Ontario's debt burden and debt service costs will remain manageable thanks to low interest rates, as well as the province's improving fiscal position and conservative debt management policy.

The report also states, "The policy decision to borrow for infrastructure spending at a time of historically low interest rates, combined with the prudent debt management practices outlined above, has helped to support the province's Aa2 rating."

~~Moody's notes that the government's policy decision to borrow for infrastructure spending at a time of historically low interest rates, combined with the prudent debt management practices has helped to support the province's rating.~~

[Borrowing Program]

Ontario conducts a robust and responsible borrowing program that protects the public interest.

In 2015–16 the government successfully completed its annual borrowing program, borrowing $32.1 billion.

As of September 30, ~~August 31,~~ 2016, the province has borrowed $13.3 billion of its
$24.4 billion requirement for fiscal 2016–17.

The recently released 2015-16 unaudited Financial Statements of the Province included a legislated pension adjustment that increased net debt by $10.7 billion.

The pension adjustment was non-cash and does not impact either the Province's total debt or its borrowing requirements.

Through prudent and cost-effective debt management, Ontario has consistently kept interest on debt costs below budget projections.

Employing term extensions has allowed the Province to lock in low interest rates for longer periods, which has reduced Ontario's refinancing risks.

It also helps offset the impact of expected higher interest rates on the interest-on-debt costs.

As of ~~August 31,~~September 30, 2016, the average term to maturity for new borrowing in 2016–17 was 15.~~6~~3 years.

In fact, since 2010 Ontario has issued $59.1 billion of bonds longer than 30 years' duration to lock in low rates.

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As a result, we have extended Ontario's weighted-average term to maturity of long-term provincial debt significantly.

In 2009-10 it was 8.1 years; last year it was 14.2 years.

As I mentioned a moment ago, it was 15.~~6~~3 years as of September 30th ~~August 31~~ this year.

The 2010 Ontario Budget forecast that, by 2016–17, the Province would have to spend 11.7 cents of every revenue dollar on interest.

The current forecast is 2.7 cents lower. We are currently tracking at nine cents of every revenue dollar.

This ratio is lower than it was in the 1990s and 2000s, and is forecast to remain lower through the outlook period in 2018–19.

The Province takes a very prudent approach to managing the risks associated with its borrowing program.

Ontario limits itself to a maximum net interest rate resetting exposure level of 35 per cent of debt issued for provincial purposes.

It also limits itself to a maximum foreign exchange exposure level of five per cent of debt issued for provincial purposes.

As of September 30, ~~July 31,~~ 2016, the actual values for Ontario's net interest rate resetting exposure and~~-~~ foreign exchange exposure were 10.6 ~~9.35~~ per cent and 0.33 per cent, respectively.

As you can see, this is well below the policy limit levels.

The Province will remain flexible in its borrowing approach.

The approach includes monitoring all major markets and seeking the most cost-effective means, over the long term, to finance Ontario's borrowing program.

It also includes reaching out to investors and investment banks, domestically and globally, to ensure that Ontario bond issues remain highly

attractive, liquid and sought after, as they have been since Ontario began accessing public markets almost 25 years ago.

I am happy to answer any questions you may have.

Questions and Answers

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OFFICE OF THE BUDGET

Q. Will you still be able to balance if Ontario's economy does not perform as strongly as you forecast? Even the FAO has said that your forecast is optimistic.

A. The government is dedicated to a fiscally sound approach to managing the Province's finances, and remains committed to balancing the budget in 2017-18 and 2018-19.

The Ontario economy continues to grow in a challenging global environment. In fact, Ontario posted higher real GDP growth in the first quarter of 2016 than Canada, the U.S. and all other G7 countries.

While uncertainty in the global economy has increased, along with increased volatility in global financial and currency markets, Ontario has a diversified economy – meaning the Province is well positioned to respond to changing global economic conditions.

From a fiscal planning perspective, Ontario incorporates prudence in its projections.

- As required by the Fiscal Transparency and Accountability Act, 2004 (FTAA), the fiscal plan incorporates includes a reserve to protect the fiscal outlook against unforeseen adverse changes in the Province's revenue and expense, including those resulting from changes in Ontario's economic performance. The reserve has been set at $1.0 billion in 2016–17, $1.1 billion in 2017–18, and $1.2 billion in 2018–19.

- The fiscal plan also includes contingency funds to help mitigate expense risks that may otherwise negatively impact Ontario's fiscal performance.

With the economy expected to continue to growth, and the Province's ongoing commitment to transform government programs and services, Ontario is well positioned to achieve balance.

Q. From your perspective, why is it important that the government has consistently beaten its deficit targets, in terms of the province's finances?

A. The government remains committed to balancing the budget by 2017-18 and is taking deliberate and responsible steps to achieve this goal.

The government recognizes that a fiscally sound approach to managing the Province's finances will:

- Provide the foundation for the long-term well-being and prosperity of Ontarians; and

- Protect the public services that Ontarians rely on.

For 2015-16, Ontario is on track to beat its deficit target for the seventh year in a row. By continuing to beat its fiscal targets, Ontario's accumulated deficit is $30 billion lower than it otherwise would have been.

Beating our deficit targets helps to keep interest on debt at a manageable level and protects future generations from rising interest costs, which could otherwise crowd out spending on government priorities.

OFFICE OF ECONOMIC POLICY

Revenue Questions and Answers

2014-15 Actual Vs. 2015 Budget Interim

	2015 Budget Interim ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	82,654	82,275	-379	-0.5
Government of Canada Transfers	21,713	21,615	-98	-0.5
Income from Government Business Enterprise	5,311	5,615	304	5.7
Other Non-Tax Revenue	8,839	9,041	202	2.3
Total Revenue	**118,517**	**118,546**	**29**	**0.0**

Q. Can you explain the $29 million increase in revenue since your 2015 Budget?

A. The modest $29 million improvement in revenues is largely due to higher net income of Government Enterprises and revenues from Other Non-Tax Revenues mainly offset by lower Taxation Revenues and Federal Payments.

- Net income from Government Enterprises is $304 million higher mainly due to higher revenue from OPG (including favourable nuclear fund financial market performance) and OLG's higher numbers of large jackpots late in the fiscal year.
- Higher Other Non-Tax revenues of $202 million came from a variety of sources, including consolidated agencies and electricity sector.
- Taxation revenues are $379 million lower largely due to lower Corporations Tax revenue (-$591M) partially offset by higher Personal Income Tax revenue (+$285M).
- Lower Federal Payments (-$98M) is largely due to a decline in transfers to consolidated government agencies.

Q. **Why are Taxation revenues $379 million below your Interim estimate?**

A. Most of the weakness in Taxation revenues is due to lower Corporations Tax (-$591M) because 2014 corporate profits turned out to be lower than estimated at the time of the 2015 Budget. This is partially offset by higher Personal Income Tax revenue (+$285M) based on results from the processing of tax returns for 2014 and prior years.

2014-15 Actual Vs. 2014 Budget Plan

	2014 Budget Plan ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	83,365	82,275	-1,090	-1.3
Government of Canada Transfers	21,882	21,615	-267	-1.2
Income from Government Business Enterprise	5,026	5,615	589	11.7
Other Non-Tax Revenue	8,598	9,041	443	5.2
Total Revenue	**118,871**	**118,546**	**-325**	**-0.3**

Q. Why are revenues $325 million lower than your 2014 Budget projection?

A. Revenues were $325 million below the 2014 Budget Plan largely due to lower Taxation revenues and lower Federal Payments partially offset by higher net income from Government Business Enterprises (mainly OPG) and higher Other Non-Tax Revenues.

- Taxation revenues were $1,090 million lower and Federal Payments were $267 million weaker than projected.
- Partially offset came from higher net income from Government Business Enterprises (+$589M) and Other Non-Tax Revenues ($443M).

Q. What accounts for the $1,090 million decrease in Taxation revenues from your 2014 Budget projection?

A. Taxation revenues were $1,090 million lower due mostly to lower Corporations Tax (-$697M) and lower Sales Tax (-$248M).

- The $697 million decrease in Corporations Tax revenue is due mainly to lower 2014 profits, lower 2013 corporate income tax assessments and higher refunds to corporations for years prior to 2009.
- The $248 million decrease in Sales Tax Revenue is due largely to revisions to HST entitlement estimates for 2013 and prior years.

Q. **Why were Federal transfers $267 million lower than your 2014 Budget projection?**

A. Lower Federal transfers were largely due to revised timelines for Building Canada Fund projects and lower transfers to government agencies, including Agricorp and Toronto 2015. These lower transfers are largely offset by lower spending associated with these transfer programs.

Q: How did net income from Government Business Enterprises increase by $589 million from your 2014 Budget projection?

A: This was mostly attributable to Ontario Power Generation Inc., reflecting lower operating costs and better financial market performance of its nuclear funds.

Q: What accounts for the $1.1 billion decrease in taxation revenues from your 2014 Budget projection?

A: Taxation revenues were $1.1 billion lower due largely to lower corporations tax revenue (-$0.7 billion) and lower sales tax revenue (-$0.2 billion).

- Lower 2013 corporate income tax assessments resulted in a higher repayment to the Canada Revenue Agency for amounts already paid to the Province for the 2013 tax year and, refunds to corporations for tax years prior to 2009 were also higher.
- Sales tax revenue was lower due to revisions to harmonized sales tax entitlement estimates for 2013 and prior tax years.

2014-15 Actual Vs. 2013-14 Actual

	2013-14 Actual ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	79,966	82,275	2,309	2.9
Government of Canada Transfers	22,276	21,615	-661	-3.0
Income from Government Business Enterprise	5,337	5,615	278	5.2
Other Non-Tax Revenue	8,331	9,041	710	8.5
Total Revenue	**115,911**	**118,546**	**2,635**	**2.3**

Q: How did revenues perform in 2014-15 compared to 2013-14?

A: In 2014-15, revenues increased by $2.6 billion or, or 2.3 per cent, from 2013-14.

- Taxation revenue increased by $2.3 billion over the previous year. The increase was across most taxation revenue sources, partially offset by a $1.9 billion decrease in Corporations Tax reflecting adjustments in respect of prior years.
- The combined net incomes of Government Business Enterprises were up $0.3 billion from the previous year.
- Federal Payments declined by $0.7 billion mainly because of a reduction in Equalization Payments, partially offset by increased health and social transfers
- Other Non-Tax revenue increased by $0.7 billion largely due to the gain of the sale of the Province's remaining General Motors shares during 2014-15.

Q: **Why is year-over-year growth in Taxation revenue 2.9 per cent when nominal GDP growth was 3.6 per cent?**

A: Growth in Taxation revenue of 2.9 per cent is lower than 2014 nominal GDP growth of 3.6 per cent largely due to a $1.9 billion decrease in Corporations Tax reflecting prior year adjustments. This included:

- a repayment of -$1.3B, due to a Federal government overpayment of 2013 corporate income tax during 2013, and
- a projected repayment to the Federal government of $0.5B for an overpayment to the Province for the 2014 tax year.

Q: **What explains the fairly strong year-over-year growth in Personal Income tax revenues of 8.9 per cent?**

A: The higher Personal Income Tax revenues growth reflects growth in personal incomes as well as the impact of the high-income measure introduced in the 2014 Budget and the net impacts of one-time prior-year adjustments in both 2013-14 and 2014-15.

Q: **Given the recent poor results for Quebec and California allowances auctions, is the Government still expecting to meet revenue targets set out in the 2016 Budget?**

A: The poor auction results suggest a risk to cap and trade revenues. However, it is too early to determine what actual impact on revenues will be.

In three joint WCI auctions held so far in 2016, allowances have gone unsold.

- In February, 94% of the allowances offered by Quebec were sold; California sold 95% of the total allowances it offered.
- In May, both Quebec and California sold about 11% of the total allowances they each offered.
- The August auction performed relatively better though still undersubscribed, selling 35% of offered allowances.

It is possible, however, that emitters are holding off on buying allowances until they get closer to the end of the compliance period (current compliance period from 2015 through 2017).

The uncertainty related to legal challenges to California`s cap and trade program may have contributed to the poor sale of allowances at the May and August auction. In joint auctions prior to 2016, all the allowances that were offered for sales were sold.

Ontario is planning to hold stand-alone auctions starting in March 2017 before linking with California and Quebec in 2018. Initial stand-alone auctions could result in a higher-than-WCI domestic carbon price.

The medium-term revenue outlook includes projected cap-and-trade proceeds from the auctioning of carbon allowanced beginning in 2017. The current estimate for proceeds is:

- $478 million in 2016-17; and
- Between $1.8 billion and $1.9 billion annually starting in 2017-18.

Revenue Forecasting Unit, Economic and Revenue Forecasting and Analysis Branch, OEP

Contact: Bruno Amara (325-0766)

ONTARIO FINANCING AUTHORITY

Friendly Questions

Debt Burden

Q. Our government has a target for reducing the net-debt-to-GDP ratio. Can you tell us more about the target and how our government is doing in terms of reaching that target?

A. Net debt, as of March 31, 2016, is forecast to be $296.1 billion, $2.8 billion lower than forecasted in the *2015 Budget*. Net debt was $284.6 billion as of March 31, 2015. The net debt-to-GDP ratio is forecast to peak at 39.6 per cent in 2015-16, remain level in 2016-17, and decline to 38.9 per cent in 2017-18 and 38.5 per cent in 2018-19.

Ontario conducts a robust and responsible borrowing program that protects the public interest. The government successfully completed its annual borrowing program in 2015-16, borrowing $32.1 billion. Long-term borrowing for 2016-17 is forecast to be $24.4 billion when factoring in $2.0 billion pre-borrowed in 2015-16. This will be the Province's smallest borrowing program since 2007-08.

As of August 31, 2016, the Province had borrowed $12.5 billion for the fiscal year. Approximately 71per cent of this year's borrowing-to-date has been completed in Canadian dollars. The remainder of the Province's borrowing-to-date has been completed in international currencies primarily through U.S. dollar global bonds, and two small Australian dollar Kangaroo bond issues.

Through prudent and cost-effective debt management, the Province has consistently kept interest on debt costs below budget projections. The *2010 Budget* forecast that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 2.7 cents lower, at 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 1990s and 2000s, and is forecast to remain lower through the outlook period in 2018-19.

Term extension has allowed the Province to lock in low interest rates for a longer period, which reduces refinancing risks and helps offset the impact of expected higher interest rates on the Province's interest on debt costs.

Going back to the beginning of fiscal 2010-11, Ontario has issued $59.1 billion of bonds longer than 30 years to lock in low rates. As a result, the weighted-average term to maturity of long-term provincial debt issued has been extended significantly, from 8.6 years in 2008-09 to 15.6 years as of August 31.

~~**Q. Noting that a key indicator of the government's ability to carry its debt entails examining the level of debt relative to the size of the economy, can you please explain further what the forecasted net debt-to-GDP ratio is for Ontario?**~~

~~**What effect does this have on the government's commitment to balancing the budget by 2017-18?**~~

~~A. The Province's net debt-to-GDP ratio is expected to peak in 2015-16 at 39.6 per cent, remain unchanged in 2016-17 and begin to decline in 2017-18.~~

~~The government continues to maintain a target of reducing the net debt-to-GDP ratio to its pre-recession level. Net Debt increases primarily for two reasons: to finance deficits and invest in capital assets. In the first few years after the global recession in 2008-09, the increase in net debt was primarily due to the deficit. However, the government is on track to eliminate the deficit and balance the budget by 2017-18. Once a balanced budget is achieved, the increase in net debt will be limited to the net investment in tangible capital assets.~~

Q: Moody's just released a report noting that Ontario's debt burden and debt service costs will remain manageable thanks to low interest rates, as well as the province's improving fiscal position and conservative debt management policy. Can you explain how your conservative debt management policies are keeping debt service costs manageable?

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A: Investor demand has allowed the Province to extend the term of its debt in recent years and lock in low interest rates for a longer period. This term extension reduces the Province's refinancing risks and helps offset the impact of expected higher interest rates on its IOD costs.

The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 23 per cent lower, at only 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Q: Moody's just released a report noting that Ontario's policy decision to borrow for infrastructure spending at a time of historically low interest rates, combined with the prudent debt management practices has helped to support the province's Aa2 rating. Can you explain how borrowing for infrastructure helps support the province's credit rating?

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A: We are making the biggest investment in public infrastructure in Ontario's history. We have a plan to invest more than $137 billion over the next 10 years, or about $160 billion over 12 years, starting in 2014–15. This is a strategic investment will grow the economy and create jobs.

Our plan is to first balance the budget while continuing to make strategic investments in capital assets. These infrastructure investments will stimulate economic growth, resulting in GDP growing more quickly than debt, and thereby lowering the net debt-to-GDP ratio.

With capital investments, the net debt-to-GDP ratio will come down more quickly than it would have without these investments in capital assets.

Capital investments are amortized over the useful life of the assets. Once a balanced budget is achieved, the increase in debt will be limited to the difference between the cash investment to build assets, and the amortization, which is a non-cash amount.

This historic investment in public infrastructure is critical to Ontario – today and tomorrow. From an economic perspective – these infrastructure investments will certainly pay off. Our investments will support an average of 110,000 jobs per year in Ontario, as well as creating significant GDP growth.

Interest Rates

Q. Chapter 2 of the Auditor General's 2014 annual report speaks to the increased vulnerability of Ontario with respect to interest rates. She points to the possible rise in rates related to borrowing.

However, I am also aware that the Province has consistently kept interest on debt costs below budget projections.

What steps has the government taken to reduce borrowing and keep interest on debt costs low?

A. Through prudent and cost-effective debt management, the Province has consistently kept interest on debt costs below budget projections. The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents on interest for every revenue dollar received. The current forecast is 23 per cent lower, at 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Extending the term of the debt that the Province issues has locked in low interest rates for a longer period, which reduces refinancing risks and helps offset the impact of expected higher interest rates on the Province's interest on debt costs.

Going back to the beginning of fiscal 2010–11, Ontario has issued $59.1 billion of bonds that do not mature for at least 30 years to lock in low rates. As a result, the

weighted-average term to maturity of long-term provincial debt issued has been extended significantly, from 8.6 years in 2008-09 to 15.~~3~~6 years as of ~~August 31.~~September 30.

Financial Instruments Standard

Q. I understand that proposed new standards by the Public Sector Accounting Board on Financial Instruments would affect interest on debt. Would it also affect other financial indicators of the provincial government?

A. The use of financial indicators helps the public and other readers of the Annual Report assess the financial health of the Province. Through the indicators' levels and trends, readers are able to gauge the impacts of economic and other events on the Province's finances, as well as how the government is responding to these.

The Public Sector Accounting Board's (PSAB) new standard on Financial Instruments, if implemented in its current form, would have a significant impact on how the Province uses derivatives to convert its current exposure in foreign currency debt into Canadian-dollar obligations. The proposed standard, which does not allow for hedge accounting, would introduce significant and difficult-to-forecast volatility in the accounting treatment of the Province's IOD, net debt and deficit. This is contrary to the current PSAB standard, comparable international and U.S. accounting standards, and Canadian private-sector accounting standards, all of which allow for hedge accounting.

Update to 2016 Budget, as of July 31, 2016

- The Province used derivatives to hedge approximately 98 per cent of its $61 billion in foreign currency debt into Canadian dollars.
- While $43 billion of this hedging would remain unaffected under the new standards, IOD and the deficit would become subject to significant swings entirely due to the type of derivative used on the remaining $18 billion.
- The derivative instruments used to hedge this $18 billion currently provide savings of up to 35 basis points, or over $60 million annually, relative to the cost of instruments that would otherwise have to be used under the new standard to eliminate volatility.
- From April 1st, 2016 to July 30th, 2016, the Canadian dollar depreciated by 0.7 cents against the U.S. dollar. Under the new standard, this would have resulted in a $1.3 billion accounting impact to the Province's IOD and deficit.

Ontario, supported by the borrowing communities of the majority of the provinces, has communicated its outstanding concerns with the standard to PSAB. It has requested that PSAB consider hedge accounting as an option, in line with comparable international, U.S. and Canadian private-sector accounting

standards. This approach would eliminate the potential accounting swings in IOD, the deficit and net debt. This would allow Ontario to continue to use the most economically efficient means of hedging its foreign exchange exposure and also ensure that the Province's financial results reflect the economic substance underlying its use of derivative instruments.

Borrowing and Debt Management – General

Q. Why was total long-term public borrowing $32.1 billion in 2015–16 when the deficit was $5.7 billion?

A. In addition to financing the deficit, long-term public borrowing refinances debt maturities and debt redemptions, funds the Province's investments in capital assets, and loans to agencies. The Province also pre-borrowed $2.0 billion of its 2016-17 requirements.

~~**Q. Why did the Net Debt-to-GDP ratio decline to 39.6 per cent at the end of fiscal 2015–16, compared to the 39.8 per cent forecast in the 2015 Budget?**~~

~~A. The reduction in the Net Debt-to-GDP ratio was primarily due to lower than forecast deficits and investment in capital assets in 2015–16.~~

Q. The Province is projected to borrow $24.4 billion in 2016–17. That's approximately $1,753 for every person in Ontario. When will the Province eventually run into a debt wall like Greece, Portugal and Ireland and be forced to raise taxes and cut services?

A. There is strong demand for Ontario bonds in both the domestic and international markets. Last fiscal year Ontario was able to borrow $32.1 billion in long-term debt while our spread, or the margin that we have to pay over the equivalent Government of Canada bond, tightened, indicating ongoing strong demand for Ontario bonds.

We expect that the liquidity of Ontario benchmark bonds and continuing confidence in the value of Ontario debt will allow us to cost-effectively complete the 2016–17 borrowing program. As of ~~August 31~~September 30, 2016, $13.3~~2.5~~ billion or 5~~4~~1 per cent, of this year's long-term borrowing requirement has been completed.

Q. Has it been difficult to complete the Province's borrowing program?

A. The Province continues to have steady access to both domestic and international bond markets. As of ~~August 31~~September 30, 2016, the Province had borrowed $13.3~~2.5~~ billion for the fiscal year. Approximately 69~~71~~ per cent of this year's borrowing-to-date has been completed in Canadian dollars. The remainder of the Province's borrowing-to-date has been completed in international currencies primarily through U.S. dollar global bonds, and two small Australian dollar

Kangaroo bond issues. In 2015–16, the Province borrowed $32.1 billion, with $2.0 billion in pre-borrowing.

Q. What is the difference between total debt, net debt and accumulated deficit?

A. Total debt represents all borrowing.

Net debt is all borrowing plus other liabilities, minus the Province's financial assets.

By analogy, think of a family's finances. A mortgage, car loans and lines of credit represent total debt. Total debt partially offset by money the family has in the bank, in RRSPs and in RESPs represents the family's net debt.

Accumulated deficit is the sum of all past Provincial surpluses and deficits, adjusted for changes in accounting rules.

Q. Is the Province planning to issue any more Green Bonds in the future?

A. On January 22, 2016, the Province of Ontario successfully priced its second Global Canadian Dollar (CAD) Green Bond for $750 million. There was strong demand for Ontario's second Green Bond issue, with 52 investors participating in the trade. Eight projects were selected as eligible and are expected to receive funding from the second Green Bond, with an emphasis on clean transportation and energy efficiency and conservation.

To date, total Green Bond financing amounts to $1.25 billion, with up to $1.2 billion allocated to Metrolinx for clean transportation projects.

As the first Canadian province to issue Green Bonds, Ontario continues to lead the way in establishing and developing a Canadian dollar Green Bond market with investor participation from around the world.

Q. What are unrestricted liquid reserves, and how do they ensure that Ontario will have sufficient liquidity to meet its financial obligations?

A. The Province maintains liquid reserves in the form of cash and temporary investments, which can immediately be converted to cash.

In the normal course of doing business, the Province enters into transactions that may require it or its counterparties to pledge short term investments. Although the pledged investments are technically owned by the Province, they are deducted from the total liquid reserves figure to arrive at unrestricted liquid reserves. This provides a more conservative measure of the liquidity available to meet the Province's financial obligations.

The Province ensures it always has a prudent level of unrestricted liquid reserves to cover all obligations in the short term.

Interest on Debt (IOD)

Q. What is the impact on IOD of a $1.0 billion change in the deficit?

A. The 2016-17 impact is forecast to be approximately $30 million.

Q. What is the impact on IOD of a one percentage point change in interest rates?

A. The 2016-17 impact is approximately $350 million.

Q. What is your assumed interest rate for the IOD forecast in the 2016 Budget?

A. The assumed ten-year interest rates are 3.1 per cent for 2016-17 and 3.8 per cent for 2017-18, based on the forecast for Government of Canada bonds that OEP collects from the private sector, plus a spread for the Ontario credit. For 2018-19, the forecast is 4.8 per cent and is based on the average Ontario interest rates over the past 15 years. This is the same methodology that we have used for the last number of years in putting together our IOD forecast. These rates are cautious and prudent, above current market rates.

Q. Will IOD costs crowd out other expenditures as interest rates rise and debt continues to climb? How can you address this problem?

A. Ontario has a realistic plan to balance its budget while investments are made in the priorities of Ontario families – health care, education, the environment and infrastructure.

Investor demand has allowed the Province to extend the term of its debt in recent years and lock in low interest rates for a longer period. This term extension reduces the Province's refinancing risks and helps offset the impact of expected higher interest rates on its IOD costs. The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 23 per cent lower, at only 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Q. We understand that the proposed new standards by the Public Sector Accounting Board on Financial Instruments would affect IOD. Would it also affect other financial indicators of the provincial government?

A. Yes, Annual Deficit, Net Debt, Accumulated Deficit and their ratios as a percent to GDP would also be affected.

Q. If the proposed accounting change indicates savings, will the government be able to spend them?

A. The proposed accounting change introduces fair value measurement and prohibits hedge accounting. If implemented as planned, the Province's reported financial results would not accurately take into account the value of its derivatives. As a result, substantial accounting gains or losses could occur. These changes in value would be accounting changes only and not real changes in cash. This gain would only have been reflected in the Province's accounting statements, with no actual change in the cash available for program spending.

Credit Ratings

Q. What are the Province's current credit ratings?

A. The Province is rated:

	Long Term	Short Term
Moody's Investors Service:	Aa2	P-1
Standard & Poor's:	A+	A-1+
DBRS:	AA (low)	R-1 (mid)
Fitch	AA-	F1+

Q. What impact did Moody's removal of the negative outlook have on your borrowing costs?

A. Credit ratings are one of a number of factors that contribute to borrowing costs. Since the 2016 Ontario Budget was released, Ontario's credit spreads have narrowed modestly. This in part reflects the fact that all four credit rating agencies have affirmed Ontario's ratings reflecting their confidence in our plan to eliminate the deficit, with Moody's improving their outlook for Ontario's credit rating.

ONTARIO ELECTRICITY FINANCIAL CORPORATION

Friendly Question

Electricity Sector Stranded Debt

Q: The stranded debt arose under the *Energy Competition Act of 1998*, and its schedule, the *Electricity Act, 1998*. The *Electricity Act, 1998*, also enabled the implementation of the Debt Retirement Charge (DRC) on electricity ratepayers.

Since May 2002, residential and other electricity users have been paying the DRC of 0.7 cents per kilowatt hour (kWh) on their electricity bills. The DRC is paid to the Ontario Electricity Financial Corporation (OEFC) to help service and pay down the stranded debt that arose because of the restructuring of Ontario's electricity sector under the *Energy Competition Act, 1998*.

However, I know that the government eliminated the DRC from residential bills as of January 1, 2016.

This legacy charge from the Harris government was eliminated from residential bills about 2 years earlier than previously estimated – saving the average residential user about $70/year.

Can you please inform the committee of the commitment that the government has to eliminating the debt retirement charge cost for commercial, industrial and all other electricity users by 2018?

A. Thank you for the question.

As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.

This would save a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*, as originally enacted. As a further step to mitigate electricity cost pressures for commercial, industrial and all other users, the government introduced legislation, passed on December 10, 2015, the *Budget Measures Act, 2015* to end the DRC on April 1, 2018, nine months earlier than previously estimated.

- A large industrial using 3,000 megawatt-hours (MWh) per month could save $21,000 per month, or about seven per cent off its electricity bills;

- For a large northern industrial in the Northern Industrial Electricity Rate program, this could be more than an eight per cent savings; and

- A small business using 20,000 kilowatt-hours (kWh) per month could save $140 per month, or about four per cent.

Ending the DRC on a legislated fixed date provides certainty to commercial, industrial and other users, and helps them more effectively plan their investment decisions.

I would note the following context. The government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. Based on interim numbers in *Budget 2016*, this is projected to be the twelfth consecutive year that the stranded debt has been reduced, to under $5 billion as at March 31, 2016, from $20.6 billion as at March 31, 2004. This allowed the government to follow through on its commitment to reduce electricity cost pressures.

Stranded Debt and Residual Stranded Debt Qs&As

Q. What is the impact of broadening ownership of H1 on Stranded Debt?

A. The interim 2015–16 results reflect the upfront benefits to OEFC of broadening the ownership of Hydro One through an initial public offering (IPO). This includes the OEFC receiving in fiscal 2015-16 – that is after March 31, 2015 -- $2.6 billion in departure tax and about $200 million in one-time additional payments in lieu of taxes (PILs), as Hydro One exited the PILs regime and will no longer pay corporate tax PILs to the OEFC.

The upfront impact on OEFC of the departure tax and one-time PILs payments on the OEFC's unfunded liability was partly offset by lower Electricity Sector Dedicated Income. In addition, the one-time departure tax reflects that Hydro One is now a taxable corporation, so it will no longer pay payments-in-lieu of corporate taxes (PILs) to OEFC, which reduces the estimated present value of future dedicated revenues to OEFC.

The government recognizes its commitment to electricity ratepayers under section 50.3 of the *Electricity Act, 1998*, and has taken steps to clarify and ensure that the benefits of selling shares in Hydro One are recognized by OEFC to contribute to the continuing reduction of its unfunded liability.

As part of the government's commitment to using the proceeds from broadening Hydro One ownership for infrastructure investments and paying down debt, proceeds related to the book value of the shares sold and the pre-IPO special dividend payment of $800 million paid by Hydro One to the Province will be used to pay down the Province's electricity sector debt and other payables.

This will allow the OEFC to reduce its overall debt, and contribute towards the Province's targeted $5 billion debt paydown. This debt paydown does not affect OEFC's stranded debt, as OEFC's receivables from the Province will be reduced by an equivalent amount.

[Note, Provincial payables to OEFC are notes payable to OEFC from the Province's acquisition of the equity in Hydro One in 1999, and in respect of cumulative net income since 1999.

Note this portion of the proceeds would have no net impact on OEFC's unfunded liability, as the cash asset would be offset by the reduction in the OEFC's receivable from the Province.]

Additional details

Under a Hydro One disposition, two future dedicated streams are affected:

1. Lower Hydro One earnings: The Province has committed to direct the income it earns from Hydro One (and OPG) in excess of the interest cost of its investment in the company. Upon a divestment, the Province would only be able to dedicate the portion of the net income that reflects its ownership stake. For example, in the case of a 15 per cent divestment, only 85 per cent of Hydro One's earnings less the associated interest cost, would be dedicated to OEFC. Currently, the Province owns about 70 per cent of Hydro One.

   Loss of federal portion of Payments in Lieu of Taxes: Prior to the IPO, Hydro One was exempted from regular federal and Ontario income tax and instead made payments in lieu of taxes to OEFC which helped service and paid down the stranded debt of the electricity sector. Payments in lieu of taxes to OEFC were equal to the federal and Ontario income tax Hydro One would pay if it were a taxable corporation. Following the beginning of broadening of ownership in Hydro One in November 2015, the Province's ownership of Hydro One fell below 90 per cent and the company ceased to be exempt from federal and Ontario income taxes and started to pay actual federal and provincial corporate income tax (CIT). As a result, OEFC would no longer receive the PILs from Hydro One equivalent to federal CIT. Under the amendments made to the *Electricity Act, 1998* in the *Budget Measures Act, 2015*, the Minister of Finance will pay the OEFC an amount equal to tax payable under the *Taxation Act, 2007* (i.e., the provincial CIT) by Hydro One Inc. (HOI), to continue to help service and pay down the electricity sector stranded debt. HOI is composed of Hydro One Ltd.'s regulated Ontario distribution, transmission and remotes businesses.

Q. What is the status of the old Ontario Hydro's stranded debt?

A. The government dedicates the revenues it receives from the electricity sector to the Ontario Electricity Financial Corporation (OEFC). All OEFC revenues, including the Debt Retirement Charge (DRC) paid by electricity consumers, are used to service and retire its debt and other obligations, as provided for under the *Electricity Act, 1998*.

For the twelfth consecutive year, the stranded debt is projected to be reduced, based on the interim 2015–16 results for the OEFC showing a projected excess of revenue over expense of more than $3 billion. The OEFC has paid down stranded debt by an estimated total of more than $15 billion from its peak in 2003-04, reducing stranded debt to under $5 billion as at March 31, 2016, based on interim numbers.

- The following table shows the unfunded liability (or "stranded debt") of OEFC since the opening amount of $19,433 million on April 1, 1999.

At March 31 ($M unless noted)	April 1, 1999	2000	2001	2002	2003	2004	2005	2006	2007
Unfunded Liability	$19,433	$20,034	$20,016	$20,085	$20,183	$20,550	$20,363	$19,293	$18,289
Increase / (Decrease)		$601	($18)	$69	$98	$367	($187)	($1,070)	($1,004)
At March 31 ($M unless noted)	2008	2009	2010	2011	2012	2013	2014	2015	Interim 2015-16
Unfunded Liability	$17,225	$16,182	$14,810	$13,448	$12,321	$11,257	$9,781	$8,185	<$5Bn
Increase / (Decrease)	($1,064)	($1,043)	($1,372)	($1,362)	($1,127)	($1,064)	($1,476)	($1,596)	>$3Bn

Residual Stranded Debt

Q. What is the residual stranded debt as at March 31, 2016?

A. The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* (Bill 144) and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt", were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. What is the current status of the residual stranded debt or what was the residual stranded debt the last time it was determined or estimated?

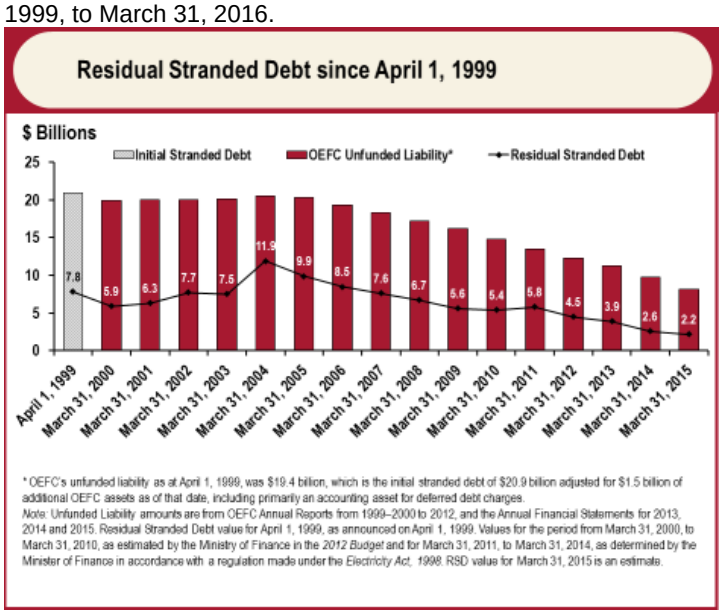
A. Prior to amendments in the *Budget Measures Act, 2015* under the *Electricity Act, 1998* the residual stranded debt was defined as the stranded debt minus the present value of projected future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC.

In the *2015 Ontario Economic Outlook and Fiscal Review*, the residual stranded debt was estimated to be $2.2 billion as at March 31, 2015. This was a decrease of $0.4 billion compared to residual stranded debt of $2.6 billion as at March 31, 2014, and was a total estimated decrease of $9.7 billion from an estimated peak of residual stranded debt of $11.9 billion as at March 31, 2004. Residual stranded debt was initially estimated as $7.8 billion as at April 1, 1999.

Residual stranded debt is estimated to have increased to a peak of $11.9 billion as at March 31, 2004, primarily due to the electricity price freeze, the downward revision in 2004 of the previous overestimation of future financial performance of Ontario Power Generation (OPG) which lowered the estimated future dedicated revenues to OEFC from the sector, and lower tax rates, resulting in lower projected future PILs to OEFC. OPG had significantly underperformed compared to its plans over the previous period of 1999 to 2004.

The estimated residual stranded debt amount and timing for its retirement were subject to uncertainty in forecasting future OEFC results and dedicated revenues to OEFC, which depend on the financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, and other factors such as interest rates and electricity consumption. The changes to the levels of unfunded liability to-date, based in part on the upfront impact on OEFC of the departure tax and one-time PILs payments, also reflect the fact that OEFC will have reduced dedicated revenues as a result of reduced ownership in Hydro One going forward.

The following chart illustrates the path of residual stranded debt from April 1, 1999, to March 31, 2016.



Q. When will the residual stranded debt be retired and the DRC end?

A. The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* (Bill 144) and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt" were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.As originally enacted, the *Electricity Act, 1998*, previously allowed for the Debt Retirement Charge (DRC) to be paid by consumers until the Minister of Finance determines that the residual stranded debt is retired.

The residual stranded debt determination was not a one-time determination. It was based on actual financial performance to-date and forecasting future OEFC results and future dedicated revenues to OEFC, which was subject to uncertainty and depended on the future financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, as well as other factors such as interest rates and electricity consumption.

As part of its commitment to reduce electricity cost pressures, the government has removed the DRC from residential electricity users' bills as of January 1, 2016.

This would save a typical residential user about $70 each year and would mean ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*.

As a further step to mitigate electricity cost pressures for non-residential users, the government introduced legislation the *Budget Measures Act, 2015*, passed in December 2015, to end the DRC for all other users on April 1, 2018, nine months earlier than previously estimated.

Ending the DRC on a legislated fixed date provides certainty to commercial, industrial and other users, and helps them more effectively plan their investment decisions.

Even after the end of the DRC, there would still be stranded debt remaining, to be serviced and paid down by OEFC's other dedicated revenues, such as payments in lieu of taxes and the Gross Revenue Charge.

Q. Why did the residual stranded debt only fall from $2.6 billion to $2.2 billion between March 31, 2014, and March 31, 2015, if the Ontario Electricity Financial Corporation's (OEFC) unfunded liability fell by about $1.6 billion and the DRC collected the same year was $0.956 billion?

A. Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998* and the revocation of Ontario Regulation 89/12, the residual stranded debt was defined under the *Electricity Act, 1998* as the stranded debt minus the estimated present value of future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC. The Debt Retirement Charge would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

The residual stranded debt fell by less than the decrease in OEFC's unfunded liability due to a reduction in the estimated present value of future dedicated revenues to OEFC from $7.2 billion as at March 31, 2014, to $6.0 billion as at March 31, 2015, which reflected the uncertainty of and update to the forecast of future dedicated revenues to OEFC. These forecasted revenues depend on the financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, regulatory decisions by the Ontario Energy Board, as well as other factors such as interest rates and electricity consumption.

The residual stranded debt was not a fixed, one-time determination. Under the *Electricity Act, 1998*, and Ontario Regulation 89/12, the estimated amount of residual stranded debt depended on actual OEFC results to-date and a forecast of future revenues to OEFC.

Q. Why has the residual stranded debt only declined by $5.6 billion since April 1, 1999, to March 31, 2015?

A. The residual stranded debt increased from $7.8 billion as at April 1, 1999, to an estimated $11.9 billion as at March 31, 2004, as a result of an increase in stranded debt primarily due to the electricity price freeze, as well as a reduction in the estimated present value of future dedicated revenues to the Ontario Electricity Financial Corporation (OEFC), mainly reflecting the downward revision in 2004 of the previous overestimation of future financial performance of Ontario Power Generation (OPG), and lower tax rates. OPG had significantly underperformed compared to its plans over the previous period of 1999 to 2004.

Since 2004, the government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. The residual stranded debt has been reduced by an estimated $9.3 billion, from an estimated peak of $11.9 billion as at March 31, 2004, to $2.2 billion as at March 31, 2015.

Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998* and the revocation of Ontario Regulation 89/12, the residual stranded debt was defined under the *Electricity Act, 1998* as the stranded debt minus the estimated present value of future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC. The Debt Retirement Charge would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt" were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. Since you have collected more than $12.5 billion in Debt Retirement Charge (DRC) revenue to March 31, 2015, why hasn't stranded debt declined by more?

A. Since 2004, the government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. The Ontario Electricity Financial Corporation (OEFC) has paid down stranded debt by an estimated total of about $12.3 billion from its peak in 2003-04, reducing stranded debt to $8.2 billion as at March 31, 2015.

- As confirmed in the Auditor General's 2011 Annual Report, the DRC is used exclusively by OEFC to meet its mandate, as provided for under the *Electricity Act, 1998*, which includes servicing and retiring its debt and other liabilities.

- Servicing costs to the OEFC include interest expense, which is currently about $1.4 billion per year and has totalled about $30.5 billion between April 1, 1999 and March 31, 2015.

- Stranded debt increased by over $1 billion between April 1, 1999, and March 31, 2004, primarily as a result of the 4.3 ¢/kilowatt-hour (kWh) price freeze, which cost OEFC about $900 million.

- The Auditor General audits OEFC's annual financial statements and has provided an unqualified opinion every year since the initial 1999–2000 financial statements.

Q. After the removal of the DRC what is the government's plan to pay into the OEFC, to make up for that money? With the lower revenue going into the OEFC, isn't there a danger of it becoming insolvent?

A. The government has removed the Debt Retirement Charge (DRC) from residential users' electricity bills as of January 1, 2016. As a further step to mitigate electricity cost pressures for commercial, industrial and all other users, the government introduced legislation, passed on December 10, 2015, the *Budget Measures Act, 2015* to end the DRC on April 1, 2018, nine months earlier than previously estimated.

Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998*, the DRC would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

Even after the end of the DRC, there would still be stranded debt remaining, to be serviced and paid down by OEFC's other dedicated revenues, such as payments in lieu of taxes and the Gross Revenue Charge. The government expects that the stranded debt will continue to decline following the end of the DRC.

Background

Q. What is OEFC?

A. The Ontario Electricity Financial Corporation (OEFC) is an agency of the Province and was established by the *Electricity Act, 1998* as the legal continuation of the former Ontario Hydro.

OEFC's mandate includes servicing and retiring the former Ontario Hydro's debt and certain other liabilities.

- OEFC inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. The debt was accumulated by building Ontario's electricity generation and transmission infrastructure.

- A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets

OEFC receives dedicated revenues to service and retire the stranded debt from a number of sources, including payments in lieu of taxes (PILs) from Ontario Power Generation (OPG), Hydro One and municipal electricity utilities (MEUs); Electricity Sector Dedicated Income from the Province in respect of the net incomes of OPG and Hydro One; and the Debt Retirement Charge paid by electricity users, as provided for by the *Electricity Act, 1998*.

Q. When will the OEFC's 2015-16 Annual Report be released publicly?

A. The 2015-16 Annual Report is currently being prepared. Under the Electricity Act, 1998, the time frame for preparing and submitting the Annual Report may be extended to reflect the timeframe for Public Accounts. Given the changes to the Electricity Act and significant activities during 2015-16 that affected OEFC, it was prudent to take additional time to review the impacts on OEFC in preparing the financial results for 2015-16..

- OEFC’s annual reports contain OEFC’s audited financial statements which are also released as part of the Province’s Public Accounts

    - OEFC's audited 2014-2015 financial statements, including the notes to the financial statements, were released on Sep 28, 2015 in Volume Two of the 2014-15 Public Accounts.

- The Auditor General audits OEFC’s annual financial statements and has provided an unqualified opinion every year since the initial 1999-2000 financial statements.

- Public Accounts may be downloaded from the Ministry of Finance web site (http://www.fin.gov.on.ca/en/budget/paccts/).

- OEFC’s past Annual Reports (1999-2000 to 2014-2015) can be downloaded from the OEFC website. (http://www.oefc.on.ca/publications.html).

- A spreadsheet containing OEFC's historical financial statements can be accessed on OEFC’s website (http://www.oefc.on.ca/pdf/OEFC_financials_historicals_en.xls)

Q. What is the difference between stranded debt and unfunded liability?

A. The Ontario Electricity Financial Corporation (OEFC) inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. The debt was accumulated by building Ontario's electricity generation and transmission infrastructure. This amount included $30.5 billion in total debt.

A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets.

OEFC's initial unfunded liability of $19.4 billion as at April 1, 1999, was the stranded debt adjusted for $1.5 billion of additional assets, including primarily an accounting asset for deferred debt charges.

Q. What was the origin of the residual stranded debt?

A. The Ontario Electricity Financial Corporation (OEFC) is one of five entities established by the *Electricity Act, 1998*, as part of the restructuring of the former Ontario Hydro. OEFC's mandate includes servicing and retiring the debt and other liabilities of the former Ontario Hydro.

- OEFC inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets.

- As of April 1, 1999, the present value of future payments-in-lieu of taxes and electricity sector dedicated income was estimated at $13.1 billion. Subtracting the $13.1 billion from stranded debt of $20.9 billion resulted in a difference of $7.8 billion, the initial estimated residual stranded debt.

The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt", including the regulation-making authority of Ontario Regulation 89/12, were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. How does OEFC provide financial assistance to the successor corporations of Ontario Hydro? Are these loans added to residual stranded debt/outstanding liabilities?

A. Consistent with its mandate, OEFC provides financial assistance to the successor corporations of Ontario Hydro, namely Ontario Power Generation (OPG) and the Independent Electricity System Operator (IESO). For example, financing is provided by OEFC for new generation development projects such as the Niagara tunnel project.

OEFC borrows to provide these loans, thereby increasing its debt portfolio, but with an offsetting asset (Notes and Loan Receivables) from the companies, thereby not affecting the unfunded liability ("stranded debt") on OEFC's balance sheet.

Q. What is the "due from the Province of Ontario" payment?

A. Due from Province

The Due from Province of Ontario that appears in OEFC's financial statements represents the cumulative value of the Electricity Sector Dedicated Income (ESDI) since April 1, 1999.

ESDI reflects the Province's commitment to dedicate its cumulative combined net income of OPG and Hydro One in excess of the Province's interest cost of its investment in its electricity subsidiaries to OEFC.

- For example, the combined net incomes of OPG and Hydro One in 2014-15 was $1,558M, and the Province's interest cost in acquiring the equity in the two companies totals about $520 million annually. This resulted in an ESDI of $1,038 million in 2014-15, so the ESDI Due from Province of Ontario increased from $3,865 million as of March 31, 2014, to $4,903 million as of March 31, 2015.

The ESDI commitment is reflected in Public Accounts as a transfer payment to OEFC from the Province's Consolidated Revenue Fund and is authorized by a voted appropriation.

CORPORATE AND ELECTRICITY FINANCE DIVISION

Asset Optimization and the Trillium Trust

Q: What asset optimization initiatives did the Province move forward with in 2014-15?

A: On February 4, 2015, the Province completed the sale of its remaining 36.7 million GM common shares for total proceeds of $1.55 billion, resulting in a fiscal gain of $1.08 billion.

General Motors also redeemed the Province's preferred shares on December 31, 2014, for total proceeds of $0.16 billion, including a gain of $0.02 billion.

The $1.1 billion gain on the sale of the common and preferred shares exceeded the $900 million asset optimization target included in the 2014 Budget for 2014–15 Net Revenue Gains from Asset Optimization.

The Ontario government directed the gain from the sale, including the additional $200 million generated above the 2014 target, to the Trillium Trust. The Province also directed to the Trillium Trust the $249 million net proceeds from the September 2013 sale of the Province's interest in 10 million shares of GM.

Q: The 2014-15 Public Accounts showed that the sale of GM shares provided revenue benefits to the Province. Is the Province selling assets to improve the path to balance?

A: The government's plan to balance the budget is centred on:

- Responsibly Managing Spending
- Transforming and Modernizing Government
- Addressing the Underground Economic and Tax Compliance
- Investing Strategically to Grow the Economy

The government's plan to eliminate the deficit does not depend on the revenues from asset sales. Maximizing the value of these assets is part of the government's economic plan for Ontario. The net revenue gains from these transactions are helping the government to deliver on its plan by investing in infrastructure.

The *Trillium Trust Act, 2014*, provides for the dedication of net revenue gains associated with the sale of designated assets to the Trust to help fund investments in transit, transportation and other priority infrastructure under Moving Ontario Forward.

Q: What's the status of the funds in the Trillium Trust?

A: The Public Accounts of Ontario 2014-2015, published in September 2015, show that $1.35 billion has been dedicated to the Trillium Trust.

These are the net proceeds from the sale of the Province's remaining General Motors common shares in early 2015, combined with net proceeds from a September 2013 GM share sale and the redemption of preferred shares in late 2014.

On August 30, 2016, the Province announced the dedication of $3.2 billion from the sale of Hydro One shares in 2015 to the Trillium Trust.

This brings the total balance of the Trillium Trust to over $4.5 billion, to help fund further investments in transit, transportation and other priority infrastructure as part of Moving Ontario Forward.

- The $3.2 billion credit to the Trillium Trust comes from:
    - About $0.8 billion in gains on sale from the sale of Hydro One shares in November 2015.
    - The net benefit to the Province of about $2.4 billion from Hydro One's recognition of the deferred tax benefit.

Q: When will the government actually start using funds from the Trillium Trust to pay for transit and infrastructure?

A: As outlined in the 2016 Budget, the government plans to begin drawing down on the balance in the Trillium Trust in 2016-17 to support the largest investment in public infrastructure in Ontario's history. Based on planned expenditures, in 2016-17 the Trillium Trust would support Moving Ontario Forward initiatives, such as

- Regional Express Rail (RER);
- Hurontario Light Rail Transit (LRT); and
- Ontario Community Infrastructure Fund.

Like most large infrastructure investments, initial spending on Moving Ontario Forward projects is focused on planning, design, property acquisition and other activities to get projects construction-ready. This will allow for identification for expenditures, as this preliminary work is completed and construction activity

becomes underway, and for cash flow timing requirements from the Trillium Trust during 2016-17 and subsequent years.

Q: What is the current status of broadening Hydro One ownership?

A: The Province completed the Hydro One initial public offering (IPO) in November 2015 and raised approximately $1.83 billion in gross proceeds and about $116 million from related share sales. As announced in early May, a secondary offering of Hydro One shares raised approximately $1.97 billion in gross proceeds, and as announced in July, the Province has an agreement in principle to sell to First Nations in Ontario up to 2.5% of Hydro One shares at a price of $18 per share.

There were other associated benefits in connection with the IPO, including a positive impact to the Province's income from Hydro One as a result of a deferred tax benefit recorded by Hydro One. The Province also received cash of $1 billion in special payments from Hydro One, including $800 million in a special dividend paid prior to the IPO, and about $200 million in additional payments in lieu of taxes to the Ontario Electricity Financial Corporation (OEFC).

On August 30, 2016, the Province announced the dedication of $3.2 billion from the sale of Hydro One shares in 2015 to the Trillium Trust, bringing total balance of the Trillium Trust to over $4.5 billion. The net revenue gains from the secondary offering in April 2016 will be credited to the Trillium Trust in the future.

The Province will proceed with future offerings in a staged and prudent manner, over time reducing its stake to 40 per cent while remaining the largest shareholder.

Through this initiative, the Province expects to generate $4 billion in net revenue gains that, through the Trillium Trust, will be reinvested in infrastructure under Moving Ontario Forward, and $5 billion to reduce debt.

Q: In April 2015, the Premier's Advisory Council on Government Assets estimated Hydro One's valuation at between $13.5 billion and $15 billion; using this estimate, the province could realize up to $9 billion from the sale of 60% of Hydro One. Does the Province still expect these benefits?

A: The Province is on track to generate approximately $9 billion in gross proceeds and other revenue benefits from broadening the ownership of Hydro One, while remaining the largest single shareholder.

Through this initiative, the Province expects to generate $4 billion in net revenue gains that, through the Trillium Trust, will be reinvested in infrastructure under Moving Ontario Forward, and $5 billion to reduce debt.

Q: In moving forward with broadening Hydro One ownership, isn't the government giving up future revenues from the company?

A: While broadening ownership in a revenue generating asset means that there may be an impact on revenues over the longer term, the fiscal impact of an asset sale includes upfront gains that the government will reinvest into public infrastructure, improving the lives of Ontarians where they live, work and play. In turn, this will create jobs, generate economic growth and additional revenues for the Province.

- The Province would also retain 40 per cent of Hydro One, following the IPO and subsequent share offerings, which would continue generating revenue for the Province.

Q: Why did the government remove certain oversight powers of the Office of the Auditor General over Hydro One?

A: To support Hydro One's transition from being wholly-owned by the Province to being publicly traded, the government agreed with the Premier Advisory Council's recommendations that the company should operate, to the extent possible, in the same legislative and regulatory environment as other publicly–traded, rate-regulated entities.

However, the Province has ensured Hydro One oversight measures are in place. Hydro One continues to be subject rate regulation by the Ontario Energy Board (OEB) and as a publicly traded company Hydro One is subject to requirements of the Business Corporations Act (Ontario) and the Securities Act (Ontario).

To further ensure the protection of ratepayers, the government required Hydro One to create a dedicated Ombudsperson, similar to those found at other publicly traded companies. The Ombudsperson is able to receive and investigate customer complaints.

The government has also put in place a governance agreement and registration rights agreement with Hydro One to clarify the Province's role as investor, including the process through which the Province nominates 40 per cent of the board of directors and the Province's rights related to future share sales by the Province or Hydro One.

The government will remain, by law, the largest single shareholder in Hydro One – and no other single shareholder or group of shareholders will be permitted to hold more than 10 per cent of the company's shares.

Q: What is the status of the potential merger between Hydro One Brampton and a group of urban local distribution companies (LDCs)?

A: The proposed merger of Hydro One Brampton with PowerStream, Enersource, and Horizon Utilities, continues to move forward.

The municipal councils for the cities of Barrie, Markham, Vaughan, Mississauga, Hamilton and St. Catharines have all voted to proceed with the merger. Ontario has also executed a Share Purchase Agreement with PowerStream, Enersource, and Horizon.

Commercial closing of the transaction would be subject to certain closing conditions, including Ontario Energy Board (OEB) approval. The proposed merger is currently being reviewed by the OEB.

- The proposed merger of these three strong performing utilities with Hydro One Brampton would create the second-largest electricity distributor in Ontario by number of customers. The merged entity would deliver efficiencies and economies of scale while continuing to provide safe, reliable and clean electricity.

Q: Will the Province realize any up-front benefit from the sale / merger of Hydro One Brampton with other local distribution companies (LDCs)? Would these benefits go to the Trillium Trust or to the Ontario Electricity Financial Corporation (OEFC)?

A: The purchasers have agreed to pay $607 million for Hydro One Brampton, subject to post-closing adjustments and regulatory approval from the Ontario Energy Board (OEB).

The *Trillium Trust Act, 2014*, ensures that net revenue gains from the sale of Hydro One Brampton shares would be credited to the Trillium Trust. Under the Act, the net revenue gains would take into account the gross proceeds less the book value of the asset and costs incurred in the disposition of the asset.

The *Electricity Act, 1998*, also allows the Province to meet its obligations to OEFC by, for example, relieving OEFC of certain debt obligations that it currently owes to the Province.

Q: Why is Hydro One Brampton being merged with three other urban local distribution companies – Powerstream, Horizon Utilities, and Enersource? Why wasn't there a competitive process for the sale/merger of Hydro One Brampton?

Together these utilities can take advantage of efficiencies of scale and resources sharing, which in turn could translate into savings for their respective ratepayers.

In the course of its Phase 2 consultations, the Premier's Advisory Council received a strong pre-emptive bid from the consortium of local distribution companies (LDCs) at the higher end of the indicative values identified in the Council's market soundings.

Such a merger will provide a much needed catalyst for wider Local Distribution Company consolidation.

As noted by the Auditor General in her 2015 Annual Report, based on information provided to the Office of the Auditor General (OAG) by Hydro One and the Ministry of Energy, the OAG's estimates that the purchase price is reasonable for Hydro One Brampton Networks, and would provide the province with a fair return on its investment.

From: Thom, Trevor
To: Mike Manning
Date: Thursday, March 30, 2017 10:15:36 AM

Hi. We are having a final internal call at 11AM. I will report back shortly after that. Think we are moving in the right direction.

Regards,

Trevor
Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
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From: Mike Manning
To: Mike Manning
Date: Monday, March 27, 2017 8:26:04 AM

Financial Advisor
-to be selected by Mike Manning, Scott Nelms & Steve Ashbourne (Blakes)
-Financial advisor is required by the Province to provide capital markets expertise
and advice with respect to plans developed by OPG and its advisors regarding structuring and marketing of the debentures to be issued under the " Ontario's Fair Hydro Plan".
-A commitment of adequate resources by your firm will be required immediately and it is currently expected that this project will be completed by September 2017, although it could extend longer.
-It is expected that the advice provided to Ontario will be based on your firm's assessment of what is best for the Province of Ontario and will be kept strictly confidential.
-The services provided will be compensated under Ontario's domestic medium term note (DMTN) program and will require no additional fees.

Suggest firms come in to make a presentation (half hour time limit) with selection based on scoring criteria (to be developed).

For example, scoring criteria could include: i) utility market experience and expertise; ii) evaluation of resources to be applied to the project;

Sent from my iPad

From: Mike Manning
To: Mike Manning
Date: Monday, March 27, 2017 8:26:04 AM

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-to be selected by Mike Manning, Scott Nelms & Steve Ashbourne (Blakes)
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and advice with respect to plans developed by OPG and its advisors regarding structuring and marketing of the debentures to be issued under the " Ontario's Fair Hydro Plan".
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Suggest firms come in to make a presentation (half hour time limit) with selection based on scoring criteria (to be developed).

For example, scoring criteria could include: i) utility market experience and expertise; ii) evaluation of resources to be applied to the project;

Sent from my iPad

From:	Holloway, Harold
To:	Scott Nelms (ENERGY)
Cc:	Mike Manning; Thom, Trevor
Date:	Thursday, April 13, 2017 10:18:41 AM
Attachments:	TD Province of Ontario NDA v2.doc

Scott,
As discussed yesterday, I attach a Non-Disclosure Agreement relating to the Fair Hydro Plan and GA Deferral Financing. I hope this is helpful. It is a form which TD has used in the past and we are happy to execute it. Please let me know if you have any questions.
Have a great long weekend.
Harold

Harold R. Holloway | Managing Director, Head of Power and Utilities
Investment Banking, Global Energy and Power Group | **TD Securities Inc.**
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T: 416 308 9091 | M: 416 270 5096 | F: 416 983 3176
harold.holloway@tdsecurities.com

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NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement (the "Agreement") is entered into, and effective from, the ____ day of _____, 20___ by and between The Province of Ontario (the "Province") and TD Securities Inc. ("**TD**"), an Ontario Corporation.

WHEREAS the Province and TD (collectively referred to as the "**Parties**" and each individually as a "**Party**") wish to discuss the Fair Hydro Plan and the associated financings (the "**Transactions**") and wish to clarify the manner in which any Confidential Information of the Province (as hereinafter defined) disclosed in the course of such discussions is to be treated by TD.

NOW THEREFORE, in consideration of the premises and mutual obligations contained herein and for other good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged), the Parties hereby agree as follows:

1. ***Definition of Confidential Information.*** For the purposes of this Agreement, the term "**Confidential Information**" means any information, knowledge, know-how, data, reports, notes, analyses, studies, interpretations, forecasts, audit reports, customer information, works, computer programs, technology, intellectual property, processes, systems, methodologies, ideas, innovations, business information, compilations, lists and other records concerning the business, financial, commercial, trade, and administrative affairs of the Province which, after the date hereof, may become known to TD, whether the form or manifestation of such Confidential Information is oral, written, electronic, digital, graphic, or any other tangible or intangible form whatsoever.

2. ***Protection and Non-Disclosure of Confidential Information.*** TD covenants and agrees that it shall protect the Confidential Information from harm, loss, theft and unauthorized access and that, except as provided herein, it shall not disclose any Confidential Information to any person or use the Confidential Information for any purpose except to the limited extent necessary to assist the Company in evaluating, negotiating and implementing the Transactions. Without limiting the generality of the foregoing, TD shall use at least the same degree of care, but no less than reasonable care, to avoid unauthorized disclosure or use of the Confidential Information as it employs in respect of its own Confidential Information of like importance. Without the prior consent of the other Party and except as otherwise provided herein, neither Party will, and each Party will direct its respective Representatives not to, disclose to any other person: (i) the existence and content of this Agreement; and (ii) the fact that discussions are taking place between the Parties concerning the Transactions.

3. ***Disclosure to Representatives.*** Notwithstanding section 2, TD may disclose the Confidential Information to those of its and its parent's directors, officers, employees, agents, contractors, consultants and legal, financial and other advisors (collectively, "**Representatives**") who need to know the Confidential Information for the purposes of assisting the Company in evaluating, negotiating and implementing the Transactions, provided that such Representatives are advised of the confidential nature of the Confidential Information. TD shall be responsible for any violation of this Agreement by its Representatives.

4. ***Exceptions to Non-Disclosure.*** Notwithstanding any other provisions of this Agreement, the obligations of TD under section 2 of this Agreement shall not apply, or will cease to apply, as the case may be, to Confidential Information if and to the extent that: (i) it was previously known to or in the possession of TD or its Representatives prior to receipt from the

Province; (ii) it is independently developed by or on behalf of TD or its Representatives without reference to the Confidential Information; (iii) it is or becomes publicly available and/or generally known in the industry, other than through a breach of this Agreement; (iv) it is disclosed to TD or its Representatives by a source other than the Province, provided such source is not known by TD or its Representatives to be bound by any contractual, legal or fiduciary obligation of confidentiality to the Province with respect to the information; (v) it is or has been excluded, in writing, from the scope of this Agreement by the Province (but only to the extent of and subject to any terms set out in such written exclusion); or (vi) TD and/or any of its Representatives is required or requested by any court, administrative agency, governmental or regulatory (including self-regulatory) body, stock exchange or securities commission of competent jurisdiction or under any applicable legal process, law, rule, regulation, subpoena, order or decree (collectively, "**Law**") to disclose, reveal or surrender any of the Confidential Information or details regarding the Transactions.

5. ***Required Disclosure.*** With respect to section 4(vi) above, if TD and/or any of its Representatives is required or requested to disclose any of the Confidential Information, TD shall, and if applicable shall direct its Representatives to, if permitted by applicable Law, notify the Province in writing promptly so that the Province may seek, at its own expense, a protective order or other appropriate remedy. In the absence of a protective order or other appropriate remedy, TD agrees to, and if applicable agrees to direct its Representatives to, furnish only that portion of the Confidential Information which is legally required (in the opinion of TD's counsel) and to provide reasonable cooperation to the Province in its effort, at its own expense, to obtain assurance, from the person to whom disclosure must be made, that the Confidential Information will be treated in a manner consistent with section 2 of this Agreement. The prohibitions and obligations in this Agreement related to the disclosure of Confidential Information and details regarding the Transactions shall not apply to any disclosure or proposed disclosure to a regulator having authority over TD or its parent.

6. ***Return or Destruction of Confidential Information.*** The Confidential Information (including any changes, revisions, improvements or modifications thereto) shall remain the Province's property. Upon the request of the Province, TD shall, and shall direct its Representatives to, return or destroy (at TD's option) all of the Confidential Information and provide the Province with written certification of compliance with this section 6. Notwithstanding the foregoing, TD and its Representatives, as applicable, may retain copies of Confidential Information: (i) that TD or its Representatives are required to retain for regulatory, legal and compliance purposes; (ii) that are automatically retained as part of a computer back-up, recovery or similar archival or disaster recovery system; or (iii) that was provided to TD's or its parent's board of directors or any committee thereof.

7. ***Equitable Relief.*** TD acknowledges and agrees that any breach or non-performance by TD of its obligations and duties in connection with this Agreement may cause the Province immediate and irreparable harm for which damages may not be an adequate remedy. Accordingly, TD agrees that the Province may have the right, in addition to its other rights and remedies, to seek equitable relief for any violation of this Agreement.

8. ***No Warranty.*** TD acknowledges and agrees that all Confidential Information is provided on an "as is" basis without any representation, warranty or covenant, express or implied, as to the origin, authorship, usefulness, reliability, fitness for a particular purpose, merchantability, accuracy, timeliness or completeness of any of the Confidential Information.

9. ***No Other Relationships or Agreements.*** The Parties agree that this Agreement is for the purposes of protecting the Confidential Information only and creates no joint venture or partnership or any agency relationship between any of them. The Parties agree that this Agreement does not in any manner whatsoever obligate them to enter into any further agreements or transactions.

10. ***General.*** This Agreement is governed by the laws of the Province of Ontario without regard to its rules on conflicts of law. Neither Party may assign its rights or obligations under this Agreement. No modification or waiver of any provision of this Agreement shall be effective unless in writing and signed by the Party sought to be bound. The headings in this Agreement are for convenience of reference only, are not part of this Agreement, and do not affect its interpretation. This Agreement is the entire agreement between the Parties on non-disclosure of confidential information and supersedes all prior representations and agreements between the Parties on that subject. This Agreement shall expire one year from the date hereof.

AGREED:

THE PROVINCE OF ONTARIO	**TD SECURITIES INC.**
By:_____	By:_____
Name:_____	Name: Trevor Thom
Title:_____	Title: Managing Director and Group Head, Government Finance

From: Tim Van Alstyne (Scotiabank GBM)
To: Mike Manning
Cc: Mark Hadden (Scotiabank GBM)
Subject: Meeting tomorrow
Date: Tuesday, March 28, 2017 12:22:18 PM

Hi Mike
The team is confirmed for 11 AM tomorrow if that changes please coordinate with Mark. Coming from Scotia Bank will be Mark Hadden, Doug Noe managing director, head of securitization Greg Lawrence, managing director head of DCM energy And Derrick Chu Energy representative from investment banking.

Good luck and we'll chat on Friday.

Cheers

Tim

Sent from my iPhone
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Traducción en español: https://urldefense.proofpoint.com/v2/url?u=http-3A__www.gbm.scotiabank.com_EmailDisclaimer_Spanish.htm&d=DwIFAw&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=faVQc6owhmqW1Epsm1IgKtKdOr6WxW_KgjwibSrG7Ns&m=EUCh8GK6yNveD3wfVk_x9ipf8GD-zFwF-6xPbedcinY&s=d7WAjJf04R6pUMun4gws6JU-68fzemvIQfRnsMIKuvs&e=

From: Nelms, Scott (MOF)
To: Mike Manning; Ronald Kwan
Subject: OEFC equity infusions to OPG
Date: Wednesday, March 08, 2017 8:18:36 AM

Hi Mike, Ron,

OPG has asked to meet with the Province to talk about financing arrangements for the Fair Hydro Plan. Gadi suggested that you would be the appropriate points of contact for this stream of work. I know this is short notice, but wonder if you might have availability to start the conversation with OPG this afternoon. I am going to pull in Energy staff as well and will send around an invite once we find a time that works.

Thanks,

Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

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scott.nelms@ontario.ca

From:	Anthony Martinello
To:	Kim Marshall; Ronald Kwan; Michael Boll; Mike Manning; Ken Kandeepan; Victor Buza
Subject:	OFA-IESO, discussion re Fair Hydro
Date:	Sunday, April 16, 2017 11:55:16 AM

Below are the proposed agenda items for our meeting.

Agenda:

1.Draw Amounts

-IESO may need to fund a) Fair Hydro forecast variances (short term), and b) Fair Hydro amounts not purchased by the OPG SPV (long term);

-in order to minimize costs and maximize cash-flow flexibility (matching to OPG SPV buys) – any appetite to amending the current 28 day minimum for draws;

2.IESO's Fair Hydro role

-IESO's credit rating agencies (Moody's Aa2, and DBRS) will examine IESO's credit capacities/solvency – need to update IESO/OFA's credit facilities to remove material adverse effect clauses or similar clauses and acknowledge/agree IESO's role in the Fairy Hydro plan and commitment to advance funds under the credit facility if needed for the Fair Hydro cash-flows.

3.General

General comments regarding IESO's Fair Hydro needs vs. IESO regular ongoing needs (corporate and market)

Regards.

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From:	Anthony Martinello
To:	Kim Marshall; Ronald Kwan; Michael Boll; Mike Manning; Ken Kandeepan; Victor Buza
Subject:	OFA-IESO, discussion re Fair Hydro

Moderator name: Anthony Martinello
Toll-free dial-in number: 1 888-402-9166
Local dial-in number: 416-933-8665
Conference ID: 4157721

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From: Brown, Rob
To: "john.s.lee@opg.com"; "OPG - Treasury Group,"; Mike Manning; "Sheen.Liu@opg.com"; Kevin Shvarts; Linda Smith; "ken.ryfa@opg.com"; Brett Kichiy; "j.hahnparker@opg.com"
Cc: Brown, Rob; Egberts, Adam; Wetmore, Jamie; Varteressian, Paul; Schoroth, Joseph; Murray, Tim
Subject: OPG Weekly Pricing
Date: Monday, September 19, 2016 8:10:44 PM
Attachments: image003.png
image004.png
image005.png
image006.png
image007.png
header.htm
16-09-19 OPG Weekly Pricing - vRBC.xls
16-09-19 New Issue Summary.pdf

Canadian Debt Capital Markets

DCM Weekly Market Update

Monday, 19 September 2016

As anticipated, new issue volumes remained elevated in the first full-week of September with ~$3.4 billion priced across eight issuers. Supply was well-diversified across the curve and spanned the full ratings spectrum, including AAA-rated supply and two high-yield offerings. Highlighting the week, Sun Life priced a jumbo C$1 billion 12NC7 subordinated offering with RBC acting as joint-bookrunner. Industrial Alliance also priced a sub-debt offering, followed by Home Trust rounding out the financial supply in syndicated NHA MBS format. In non-financial corporates, Brookfield Asset Management priced a C$500 million long 10-year, with RBC acting as a joint bookrunner, while in the high yield space Iron Mountain and Canexus Corp. accessing the high-yield space, representing the third and fourth low-grade transactions in calendar 2016, both pricing 7NC3 offerings for C$360 million in aggregate. RBC acted as lead left bookrunner on the Iron Mountain offering. Adding to the diverse array of product, Mountain View and Plenary Infrastructure Calgary priced amortizing P3 transactions and Real-T accessed the securitization space. Despite more volatile tone in equities, credit tone remained firm with well oversubscribed orderbooks supporting the ability to upsize and price at the tight end of guidance. The marketing front also remained active, with RBC hosting fixed income targeted events for Wells Fargo and Synchrony Financial, and announcing events next week for Central1 and Daimler Lease ABS. Also of note, RBC will be hosting its annual Corporate and Energy Infrastructure conference in Toronto on Tuesday.

Secondary markets remained busy across sectors in two-way flow. Financials were particularly active with banks and insurance credit flows improving following recent primary supply. Similarly, Telus accessed the US market pricing a $600 million long 10-year with RBC acting as a joint-active bookrunner, supporting domestic liquidity in the sector. In sympathy with volatile equity markets and the recent deluge of supply, spreads have halted their three-week tightening streak in Canada and closed the week 2-5bps wider offsetting a decline in underlying yields.

The government primary market was extremely active this week, with six issues pricing for aggregate proceeds of ~C$7 billion. Early in the week the City of Toronto priced a C$200 million dual-tranche transaction, consisting of a C$100 million re-opening of their 10-year issue and a C$100 million re-opening of their 30-year issue. On Wednesday the Region of Waterloo completed a 1-20 year ~C$104 million serial issue which represented the second municipal issue this fall. On Thursday, Canada Housing Trust priced a 5-year C$5 billion issue, the Province of Ontario issued a C$750 million re-opening of their 10-year benchmark issue, and the Province of Saskatchewan issued a C$475 million re-opening of their 10-year issue, representing one of the busiest days of the

year. To close out the week, the Province of Quebec re-opened their December 2048 issue for C$500 million. In secondaries, provincial trading was active on the back of the new issues, with better buying in the long end pulling spreads ~0.5bps tighter on the week. CMB flows also remained active following this week's issue with better buying as spreads ended 0.5-2bps tighter.

EQUITY MARKET UPDATE

North American equity indices seesawed this week with commodities underperforming and speculation around the overnight rate contributing to renewed volatility. Economic data also underwhelmed investors with soft initial jobless claims and retail sales. The TSX fell 0.6% to 14,451, while the S&P500 and Dow Jones rose 0.5% and 0.2% to 2,139 and 18,124 respectively. In commodities, crude fell $2.85 to close at $43.03, while gold fell $17.48 to end the day at $1,310.35. In currencies, the Canadian dollar weakened by 1.25% to 1.3212USDCAD.

Index	Level		1 Week Δ
S&P/TSX	14,451	▼	0.6%
DJA	18,124	▲	0.2%
S&P 500	2,139	▲	0.5%
NASDAQ	5,245	▲	2.3%
Oil	$43.03	▼	$2.85
Gold	$1,310.35	▼	$17.48
USDCAD	1.3212	▲	1.25%

CANADIAN NEW ISSUES

Corporate

Corporates

Mon, Sep 12 – Iron Mountain Canada Operations ULC (-/Ba3/BB-) – C$250 million 5.375% 7NC3-year senior unsecured offering

Tues, Sep 13 – Brookfield Asset Management Inc. (A(L)/Baa2/A-) – C$500 million 3.80% 10.5-year offering at GoC + 253bps

Tues, Sep 13 – Industrial Alliance Insurance and Financial Services Inc. (A/-/A) – C$400 million 3.30% 12NC7-year subordinated debentures at GoC + 235bps

Tues, Sep 13 – Sun Life Financial Inc. (A(L/-/A-) – C$1 billion 3.05% 12NC7-year subordinated debentures at GoC + 208bps

Tues, Sep 13 – Mountain View Partners (A(L)/A3/-) – ~C$381 million 3.974% 25-year average life offering

Tues, Sep 13 – Plenary Infrastructure Calgary LP (-/-/-) – ~C$57 million 3.952% 18-year average life offering

Thur, Sep 15 – Home Trust Company (AAA/-/AAA) – ~C$296 million 1.35% 5-year syndicated NHA MBS (3.953-year WAL) at GoC + 89 bps

Thur, Sep 15 – Canexus Corp (-/-/-) – C$110 million 7.875% 7NC3 year senior notes at GoC + 695 bps

Fri, Sep 16 – REAL-T (AAA(sf) to BBB(L)(sf)- ~C$403.6 million multi-tranche securitization offering

Government

Tues, Sep 13 – City of Toronto (AA/Aa1/AA) – C$100 million 2.40% 24Jun26 (re-opening) at CAN 1.50% 1Jun26+116bps and a C$100 million 3.25% 24Jun46 (re-opening) at CAN 3.50% 1Dec45 + 143bps

Wed, Sep 14 – Regional Municipality of Waterloo (-/Aaa/-) – C$104.55 million 1-20 years serial offering at various spreads

Thur, Sep 15 – Canada Housing Trust (AAA/Aaa/AAA) – C$5 billion 1.15% 22Sep16 at CAN 0.75% 1Sep21+44.5bps

Thur, Sep 15 – Province of Saskatchewan (AA/Aaa/AA+) – C$475 million at CAN 1.50% 1Jun26 + 100bps

Thur, Sep 15 – Province of Ontario (AA(L)/Aa2/A+) – C$750 million at CAN 1.50% 1Jun26 + 86.5bps

Fri, Sep 16 – Province of Quebec (A(H)/Aa2/A+) – C$500 million at CAN 3.50% 1Dec45 + 104bps

NORTH AMERICAN RATES UPDATE

North American government yield curves steepened last week with Fed speak contributing to the volatility in anticipation of this Wednesday's FOMC rate decision. Before the Fed's "quiet period", Governor Lael Brainard's speech at the Chicago Council on Global Affairs dampened speculation of a rate hike. Globally, the Bank of England maintained its benchmark rate, but suggested there is a chance of another rate cut as they continue to assess the long-term effects of Brexit. In reaction to the central bank activity, US Treasuries closed 2bps lower in the short-end and finished up to 5bps higher in longs. In Canada, bonds sold off sharply with the curve ending unchanged in the 2-year and rising 5bps in the long-end. The market is suggesting only a 20% probability of a hike this week from the Fed and a 54% likelihood of a change by the December meeting.

GoC

Term	Yield (%)	1 Week Δ (bps)
2yr	0.58%	unch
5yr	0.74%	▲ 3
10yr	1.19%	▲ 4
30yr	1.82%	▲ 5

UST

Term	Yield (%)	1 Week Δ (bps)
2yr	0.76%	▼ 2
5yr	1.20%	▼ 2
10yr	1.69%	▲ 2
30yr	2.45%	▲ 5

MARKET IMPLIED BOC RATES

Market Implied Rates

Meeting	Implied Rate
October 19, 2016	0.4970
December 7, 2016	0.5090
January 18, 2017	0.5000

SWAPS

The Canadian swaps market saw a continued trend of spread tightening this week, with spreads lower across the curve by 0.25 to 1 bps. Early in the week saw low liquidity in the market, with spreads volatile on the back of flow skewed towards better receiving. However, flow improved markedly later on in the week, with a number of market participants active after the CMB auction. BA/LIBOR spreads were mixed, with spreads moderately tightening to unchanged in the front end, and wider by 1.25 to 3.5 bps in the long end of the curve.

Swaps	Spread (bps)	1 Week Δ(bps)
2yr	34.25	▼ 0.75
3yr	32.50	▼ 0.50
5yr	30.50	▼ 0.25
7yr	23.75	▼ 0.50
10yr	19.75	▼ 1.00
30yr	-8.50	▼ 0.50

LOOKING AHEAD

Date	Release	Survey	Prior
Canadian Economic Data			
Fri, Sep 23	CPI YoY	1.40%	1.30%
Fri, Sep 23	CPI Core MoM	0.20%	0.00%
Fri, Sep 23	Retail Sales MoM	0.20%	-0.10%
US Economic Data			
Wed, Sep 21	FOMC Rate Decision	0.50%	0.50%
Wed, Sep 21	MBA Mortgage Applications	--	4.20%
Thur, Sep 22	Initial Jobless Claims	260k	260k
Fri, Sep 23	Markit US Manufacturing PMI	52	52
International Economic Data			
Wed, Sep 21	Eurozone PPI YoY	--	-3.10%
Wed, Sep 21	Eurozone Industrial Production YoY	--	-3.80%
Wed, Sep 21	BOJ Policy Rate	-0.10%	-0.10%
Fri, Sep 23	Markit Eurozone Manufacturing PMI	51.5	51.7
Fri, Sep 23	Eurozone GDP QoQ	1.40%	1.40%

SELECTED COMPANIES REPORTING THIS WEEK

US

Adobe Systems, Lennar, FedEx, General Mills, Bed Bath & Beyond

Regards,

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Jamie Wetmore
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Market Implied Rates

Meeting	Implied Rate
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5yr	30.50	▼ 0.25
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Wed, Sep 21	MBA Mortgage Applications	--	4.20%
Thur, Sep 22	Initial Jobless Claims	260k	260k
Fri, Sep 23	Markit US Manufacturing PMI	52	52
International Economic Data			
Wed, Sep 21	Eurozone PPI YoY	--	-3.10%
Wed, Sep 21	Eurozone Industrial Production YoY	--	-3.80%
Wed, Sep 21	BOJ Policy Rate	-0.10%	-0.10%
Fri, Sep 23	Markit Eurozone Manufacturing PMI	51.5	51.7
Fri, Sep 23	Eurozone GDP QoQ	1.40%	1.40%

Bank Name	RBC
Date	9/19/2016

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-Year	10-Year	5-Year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.83%	1.20%	0.74%	0.04%	0.03%	0.02%
Curve Adjustment (bp)	0.0	2.7	0.5	-	0.20	0.300
Spread to GoC Curve (bp)	**193.0**	**145.0**	**112.0**	(4.0)	(4.0)	(4.0)
Re-Offered Yield	3.76%	2.68%	1.87%	0.00%	-0.01%	-0.02%
Commission (bp)	2.8	4.6	7.4	0.0	(0.0)	(0.0)
All-in Yield	**3.79%**	**2.73%**	**1.94%**	**0.00%**	**-0.01%**	**-0.02%**

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	165.0	124.0	89.0	1.0	1.0	1.0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
TransAlta Corp (BBB/BBB-)		700.0	500.0		-25.0	-25.0
Nova Scotia Power (A(L)/-/BBB+)	186.0	138.0	105.0	1.0	1.0	1.0
Bruce Power (BBB/Baa2/BBB)	291.0	233.0	165.0	0.0	0.0	0.0
EPCOR (A(L)/-/A-)	169.0	127.0	94.0	1.0	1.0	1.0
FortisBC (A(L)/Baa1/-)	177.0	137.0	104.0	1.0	1.0	1.0
FortisAlberta (A(L)/-/A-)	173.0	133.0	100.0	1.0	1.0	1.0
TCPL (A(L)/A3/A-)	225.0	175.0	130.0	5.0	5.0	5.0

RBC Capital Markets®

NEW ISSUE SUMMARY September 12 - September 16, 2016

CORPORATE NEW ISSUANCE

Issuer	Price Date	Size (CAD)	Maturity	Coupon (%)	Spread (bps)	Lead Dealer(s)
Iron Mountain Canada Operations ULC	12-Sep-16	250	15-Sep-23	5.375%	GoC+449.5	RBC/SCI
Brookfield Asset Management Inc.	13-Sep-16	500	16-Mar-27	3.800%	GoC+253	RBC/CIBC/SCI
Industrial Alliance Insurance and Financial Services Inc.	13-Sep-16	400	15-Sep-28	3.300%	GoC+235	RBC/CIBC/TD
Sun Life Financial Inc.	13-Sep-16	1,000	19-Sep-28	3.050%	GoC+208	RBC/BMO/SCI
Mountain View Partners	13-Sep-16	381	31-Mar-51	3.974%	n/a	SCI/TD
Plenary Infrastructure Calgary	13-Sep-16	57	31-Aug-48	3.952%	n/a	TD
Home Trust Company	15-Sep-16	296	1-Sep-21	1.350%	n/a	RBC/BMO
Canexus Corp	15-Sep-16	110	20-Sep-23	7.875%	GoC+695	CIBC
Real Estate Asset Liquidity Trust	16-Sep-16	404	Var.	Var.	Var.	RBC
TOTAL		**3,398 MM**				

GOVERNMENT NEW ISSUANCE

Issuer	Price Date	Size (CAD)	Maturity	Coupon (%)	Spread (bps)	Lead Dealer(s)
City of Toronto	13-Sep-16	100	24-Jun-26	2.400%	GoC+116	CIBC/RBC/SCI
City of Toronto	13-Sep-16	100	24-Jun-26	3.250%	GoC+143	CIBC/RBC/SCI
Regional Municipality of Waterloo	14-Sep-16	105	Var.	Var.	Var.	RBC/CIBC/NBF
Canada Housing Trust	15-Sep-16	5,000	15-Dec-21	1.150%	GoC+44.5	BMO/NBF/RBC/SCI
Province of Saskatchewan	15-Sep-16	475	2-Jun-26	2.550%	GoC+100	RBC/CIBC/SCI/BMO/TD
Province of Ontario	15-Sep-16	750	2-Jun-26	2.400%	GoC+86.5	TD/CIBC/RBC
Province of Quebec	16-Sep-16	500	1-Dec-48	3.500%	GoC+104	NBF/CIBC/SCI
TOTAL		**7,030 MM**				

From: Egberts, Adam
To: "john.s.lee@opg.com"; "OPG - Treasury Group,"; Mike Manning; "Sheen.Liu@opg.com"; Kevin Shvarts; Linda Smith; "ken.ryfa@opg.com"; Brett Kichiy; "j.hahnparker@opg.com"
Cc: Brown, Rob; Egberts, Adam; Wetmore, Jamie; Varteressian, Paul; Schoroth, Joseph; Murray, Tim
Subject: OPG Weekly Pricing
Date: Monday, October 03, 2016 5:15:04 PM
Attachments: image003.png
image004.png
image005.png
image006.png
image007.png
header.htm
16-10-03 OPG Weekly Pricing - vRBC.xls
16-10-03 New Issue Summary.pdf

Canadian Debt Capital Markets

DCM Weekly Market Update

Monday, 3 October 2016

Issuance in the Canadian corporate primary market was modest for the second consecutive week, with only one transaction coming from Nissan Canada Financial Services pricing its inaugural Canadian offering. The transaction consisted of a C$500 million three-year offering, and consistent with recent new issues, it was met with strong demand which allowed it to price at the tight end of guidance with broad distribution and very low fills. The pause in primary market activity has allowed investors to digest recent supply after a record summer and active start to September. Activity should resume in October, with a healthy marketing calendar positioning issuers for near term market access. This week, RBC hosted deal-related marketing for Kingston Solar LP (project finance), Calgary Fuel Facilities Corporation Ltd, and Daimler via their securitization vehicle (MBARC). RBC also announced events next week for the University of Ottawa and GM Financial. Secondary trading was active last week with notable activity across sectors including bank deposit notes, auto-finance, oil and gas, CMT and energy/utilities. Two-way flows were evident across the curve in the absence of primary market supply. Despite favourable tone, spreads widened modestly on the week, with the exception being oil and gas credits who benefitted from the OPEC announcement of a new production ceiling, with elevated trading volumes and notable spread tightening across names in the sector.

The government primary market was active last week, with two issues pricing aggregate volume of C$530 million. The Municipal Finance Authority of British Columbia priced a C$130 million re-opening of its June 2026 issue and the Province of Nova Scotia priced an upsized C$400 million 10-year offering. This was Nova Scotia's first syndicated fixed rate bond since January 2015. Secondary provincial flows last week were healthy. Provincial spreads ended the week off highs but were wider overall by 0.5-1.5bps across the curve. Despite CMB volumes that were healthy through the week, spreads were relatively volatile. Better selling in the 5-year and 10-year pushed spreads 1.5-3bps wider, while the front end tightened 0.5-1bps.

EQUITY MARKET UPDATE

North American equity indices rose on the week with modestly positive economic data in both Canada and the US throughout the week including jobless claims, GDP, home sales and durable goods. Globally, OPEC also announced a tentative agreement to cut production to 32.5 million barrels per day, the first cut in eight years. The
subsequent rally in commodities, including oil which was up $3.76 to $48.24, led the TSX to outperform until a dip Friday afternoon, ending up 0.2% at 14,726. South of the border the S&P and

NASDAQ rose 0.2% and 0.1% respectively to 2,168 and 5,312. Also on the week, gold fell $21.69 to $1,315.87 and the loonie appreciated 0.34% against the U.S. Dollar to close at 1.3127USDCAD.

Index	Level		1 Week Δ
S&P/TSX	14,726	▲	0.2%
DJA	18,308	▲	0.3%
S&P 500	2,168	▲	0.2%
NASDAQ	5,312	▲	0.1%
Oil	$48.24	▲	$3.76
Gold	$1,315.87	▼	$21.69
USDCAD	1.3127	▼	0.34%

CANADIAN NEW ISSUES

Corporate

Thur, Sep 29 - Nissan Canada Financial Services (A(L)/A3/-) – C$500 million 1.584% 3-year senior unsecured notes at GoC + 107bps

Government

Wed, Sep 28 - Municipal Finance Authority of British Columbia (-/Aaa/AAA) – C$130 million 2.50% 10-year re-opening at GoC +105bps

Thur, Sep 29 - Province of Nova Scotia (A(H)/Aa2/A+) – C$400 million 2.10% 1-Jun-27 new issue at CAN 1.00% 1-Jun-27 +102bps

NORTH AMERICAN RATES UPDATE

North American bond yields declined on the week with investors seeking safety on global volatility concerns. Namely, the Bank of England commented on additional easing that may be required in the aftermath of Brexit. There were also a number of Fed speakers, particularly mid-week, including Janet Yellen, although little new guidance on timing of the next rate hike surfaced. Futures markets continue to point to a rate hike in the US before the end of the year at the December meeting (60% probability weighting). In the US, rates rose 1bp in the short end and term rates declined 1-3bps in a flattening bias. In Canada the short end was unchanged, while term rates declined 1-5bps, with a flattening bias out to the 10-year.

GoC

Term	Yield (%)	1 Week Δ (bps)
2yr	0.52%	unch
5yr	0.62%	▼ 1
10yr	1.00%	▼ 5
30yr	1.66%	▼ 4

UST

Term	Yield (%)	1 Week Δ (bps)
2yr	0.76%	▲ 1
5yr	1.15%	▼ 1
10yr	1.59%	▼ 2
30yr	2.32%	▼ 3

MARKET IMPLIED BOC RATES

Market Implied Rates

Meeting	Implied Rate
October 19, 2016	0.4850
December 7, 2016	0.4760
January 18, 2017	0.4550

SWAPS

The Canadian swap market displayed notable volatility over the week as US presidential debates, weakness from the European banking sector and strength in oil prices contributed to uneven sentiment. Given the rally in underlying rates as a result of the flight-to-quality trade, the market

was dominated by better paying interest from bank treasuries and real money accounts as swap spreads widened 1.50 bps – 3.50 bps with the greatest movement in the 10-year part of the curve while the 30-year benchmark tightened 0.25 bps. Of particular note last week, the 10-year swap rate reached 1.192% which represents an all-time low for that tenor. BA/LIBOR basis tightened 0.75 bps - 1.25 bps across the curve on the back of cross border activity from domestic financial institutions.

Swaps	Spread (bps)	1 Week Δ(bps)
2yr	36.00	▲ 2.00
3yr	35.00	▲ 1.50
5yr	34.75	▲ 2.25
7yr	28.00	▲ 3.00
10yr	25.25	▲ 3.50
30yr	-7.50	▼ 0.25

LOOKING AHEAD

Date	Release	Survey	Prior
Canadian Economic Data			
Mon, Oct 3	RBC Canadian Manufacturing PMI	--	51.1
Thur, Oct 6	Building Permits MoM	1.50%	0.80%
Fri, Oct 7	Unemployment Rate	7.00%	7.00%
Fri, Oct 7	Net Change in Employment	7.5k	26.2k
US Economic Data			
Mon, Oct 3	ISM Manufacturing	50.5	49.4
Wed, Oct 5	Durable Goods Orders	--	0.00%
Wed, Oct 5	Trade Balance	-$40.0b	-$39.5b
Thu, Oct 6	Initial Jobless Claims	256k	254k
Thur, Oct 6	Continuing Claims	--	2062k
Fri, Oct 7	Change in Nonfarm Payrolls	170k	151k
Fri, Oct 7	Unemployment Rate	4.90%	4.90%
Fri, Oct 7	Change in Manufacturing Payrolls	-4k	-14k
Fri, Oct 7	Labor Force Participation Rate	--	62.80%
International Economic Data			
Mon, Oct 3	RBA Cash Rate Target	1.50%	1.50%
Fri, Oct 4	Eurozone Unemployment Rate	--	8.30%
Fri, Oct 7	Eurozone Industrial Production YoY	-1.30%	-0.10%

SELECTED COMPANIES REPORTING THIS WEEK

US

Monsanto, Yum! Brands, Constellation Brands, Micron Technology

Regards,

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Index	Level		1 Week Δ
S&P/TSX	14,726	▲	0.2%
DJA	18,308	▲	0.3%
S&P 500	2,168	▲	0.2%
NASDAQ	5,312	▲	0.1%
Oil	$48.24	▲	$3.76
Gold	$1,315.87	▼	$21.69
USDCAD	1.3127	▼	0.34%

GoC

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2yr	0.52%	unch
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10yr	1.00%	▼ 5
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UST

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2yr	0.76%	▲ 1
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10yr	1.59%	▼ 2
30yr	2.32%	▼ 3

Market Implied Rates

Meeting	Implied Rate
October 19, 2016	0.4850
December 7, 2016	0.4760
January 18, 2017	0.4550

Swaps	Spread (bps)	1 Week Δ(bps)
2yr	36.00	▲ 2.00
3yr	35.00	▲ 1.50
5yr	34.75	▲ 2.25
7yr	28.00	▲ 3.00
10yr	25.25	▲ 3.50
30yr	-7.50	▼ 0.25

Date	Release	Survey	Prior
Canadian Economic Data			
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Wed, Oct 5	Durable Goods Orders	--	0.00%
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Thur, Oct 6	Continuing Claims	--	2062k
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Bank Name	RBC
Date	10/3/2016

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-Year	10-Year	5-Year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.66%	0.99%	0.62%	-0.03%	-0.03%	0.01%
Curve Adjustment (bp)	0.0	3.1	0.7	-	0.20	0.100
Spread to GoC Curve (bp)	**193.0**	**146.0**	**111.0**	1.0	1.0	1.0
Re-Offered Yield	3.59%	2.49%	1.74%	-0.02%	-0.02%	0.02%
Commission (bp)	2.7	4.6	7.4	(0.0)	(0.0)	0.0
All-in Yield	**3.62%**	**2.53%**	**1.81%**	**-0.02%**	**-0.02%**	**0.02%**

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	164.0	124.0	89.0	1.0	1.0	1.0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
TransAlta Corp (BBB/BBB-)		650.0	450.0		0.0	0.0
Nova Scotia Power (A(L)/-/BBB+)	186.0	139.0	104.0	1.0	1.0	1.0
Bruce Power (BBB/Baa2/BBB)	287.0	227.0	162.0	-3.0	-3.0	-3.0
EPCOR (A(L)/-/A-)	169.0	129.0	94.0	3.0	3.0	3.0
FortisBC (A(L)/Baa1/-)	176.0	138.0	103.0	1.0	1.0	1.0
FortisAlberta (A(L)/-/A-)	172.0	134.0	99.0	1.0	1.0	1.0
TCPL (A(L)/A3/A-)	225.0	170.0	120.0	0.0	0.0	0.0

RBC Capital Markets®

NEW ISSUE SUMMARY September 23 - September 30, 2016

CORPORATE NEW ISSUANCE

Issuer	Price Date	Size (CAD)	Maturity	Coupon (%)	Spread (bps)	Lead Dealer(s)
Nissan Canada Financial Services	29-Sep-16	500	7-Oct-19	1.584%	GoC+107	TDSI/CIBC
TOTAL		**500 MM**				

GOVERNMENT NEW ISSUANCE

Issuer	Price Date	Size (CAD)	Maturity	Coupon (%)	Spread (bps)	Lead Dealer(s)
Municipal Finance Authority of British Columbia	28-Sep-16	130	19-Apr-26	2.500%	GoC+105	RBC/NBF/SCI
Province of Nova Scotia	29-Sep-16	400	1-Jun-27	2.100%	GoC+102	TD/BMO/SCI
TOTAL		**530 MM**				

From: Mike Manning
To: Gadi Mayman
Cc: Bonnie Lemcke
Subject: OPG discussions with ratings agencies
Date: Wednesday, March 01, 2017 2:47:49 PM

Hi Gadi:
I got a call from John Lee on them having discussions with the ratings agencies after the GA Smoothing announcement. They would like to do some coordination with us which probably makes sense. I also talked to Bonnie about the Province's plans. My understanding is that there will be a media meeting at 8:00 tomorrow and a Media Press Conference at 10:00. In addition, there will be a DBRS conference call/meeting at 11:00.

I don't think we need to give OPG guidance on the timing of their discussions with the ratings agencies, except for waiting a period of time until after the Media Press Conference at 10:00. Let me know if you would like to give them particular guidance on timing or coordinating with the Province beyond that and I will let John know.

Mike

From:	Scotiabank - Global Banking and Markets (Scotiabank)
To:	"john.s.lee@opg.com"; "mmanning@ofina.on.ca"; "Linda.Smith@ofina.on.ca"; "Sheen.Liu@opg.com"; "brett.kichiy@ofina.on.ca"; "richard.wong@opg.com"; "ken.ryfa@opg.com"; "j.hahnparker@opg.com"; Kevin Shvarts
Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 03/20/2017
Date:	Monday, March 20, 2017 6:24:53 PM
Attachments:	OPG Weekly Indicative Spreads - March 20, 2017.xlsx Ontario Power Generation-Mar-20-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	20-Mar-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Mar-22			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.50%			
Benchmark Yield	2.40%	1.83%	1.21%	-0.11%	-0.12%	-0.11%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+157	+112	+87	-3	-2	-2
Re-Offered Yield	3.97%	2.95%	2.08%	-0.14%	-0.14%	-0.13%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**4.01%**	**3.00%**	**2.15%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+142	+97	+72	-3	-2	-2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	154	113	88	-3	-2	-2
EPCOR (A(L)/-/A-)	142	99	74	-3	-2	-2

Bank Name
Date

Indicative OPG New Issue Spreads	Current	
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.51%	1.95%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+160	+114
Re-Offered Yield	4.11%	3.09%
Commission (bp)	4.00	5.00
All-in Yield	**4.15%**	**3.14%**

Primary Comparable (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+145	+99

Other Comparables (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	157	115
EPCOR (A(L)/-/A-)	145	101

Scotiabank
13-Mar-17

	5-year
1-Mar-22	
0.50%	
1.32%	
+89	
2.21%	
7.00	
2.28%	

	5-year
+74	

	5-year
90	
76	

Indicative New Issue Spreads

Monday, March 20, 2017

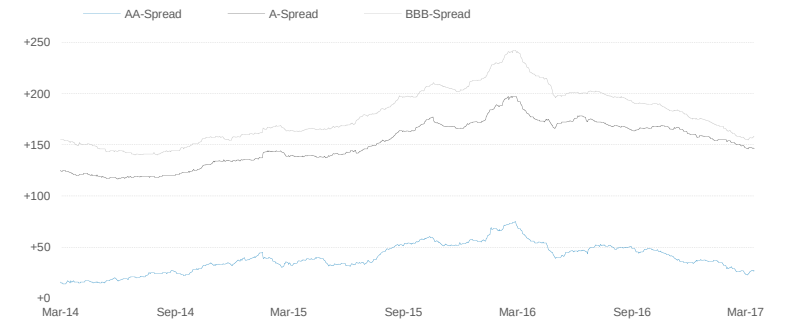
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.50% 1-Mar-22		1.50% 1-Jun-26		2.75% 1-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.21%	-0.11%	1.83%	-0.12%	2.40%	-0.11%
Indicative Spread	**+87**	-2	**+112**	-2	**+157**	-3
Indicative Re-offer Yield	2.08%	-0.13%	2.95%	-0.14%	3.97%	-0.14%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.146%		2.995%		4.009%	
All-in Spread to GoC curve (bp)	+94		+117		+161	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
16-Mar	H2O Power LP	A(L)/-/-	$400M	12.7 Yr	n.a.
16-Mar	CIBC	AA/A+/Aa3	$1,250M	5 Yr	+80
14-Mar	SmartREIT	BBB/-/-	$150M	5 Yr	+155

COMPARABLES	Ratings (DBRS/Moody's/S&P)	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+87**	-2	**+112**	-2	**+157**	-3
Hydro One	A(H)/A3/A	+72	-2	+97	-2	+142	-3
Nova Scotia Power	A(L)/-/BBB+	+88	-2	+113	-2	+154	-3
EPCOR	A(L)/-/A-	+74	-2	+99	-2	+142	-3

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market was active last week, with three issuers tapping the market for a combined $1.8 billion. CIBC and SmartREIT each came to market with 5 year offerings, raising $1.25 billion and $150 million, respectively. H2O Power also printed $400 million 12.7 year secured notes. The Fed hiked 25 bps on Wednesday as expected, but the market viewed the statement as dovish as no additional hikes were added to the FOMC's "dot plot" forecast (1-2 additional hikes still forecasted for this year). Market tone remained stable with the S&P and TSX trading slightly higher WoW. The Dutch election, along with Article 50 Brexit legislation passing in the U.K. had little impact on markets. Oil prices also stabilized after dropping ~10% the week prior, finishing the week roughly unchanged. Canadian corporate spreads were generally tighter 1-4 bps on the week, in line with U.S. spreads which were ~4 bps better. At week end, YTD new issue volumes totaled $24.9 billion, 17% ahead of 2016's pace.

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GLOBAL ECONOMICS

MARCH 2017 | CALENDAR OF ECONOMIC RELEASE DATES

FOR SELECTED KEY ECONOMIC REGIONS

Monday	Tuesday	Wednesday	Thursday	Friday
		1 U.S. Personal Income & Expenditures (8:30)-Jan ISM Manufacturing Index (10:00)-Feb Construction Spending (10:00)-Jan Beige Book (14:00) Domestic Vehicle Sales-Feb CANADA Current Account (8:30)-4Q BoC Policy Announcement (10:00)	**2** CANADA GDP (8:30)-4Q EURO ZONE Producer Prices (10:00 GMT)-Jan Unemployment Rate (10:00 GMT)-Jan	**3** U.S. ISM Non-Manufacturing Composite (10:00)-Feb JAPAN Unemployment Rate-Jan CPI, Tokyo-Feb EURO ZONE Retail Sales (10:00 GMT)-Jan
6 U.S. Factory Orders (10:00)-Jan	**7** U.S. Trade Balance (8:30)-Jan Consumer Credit (15:00)-Jan CANADA Merchandise Trade Balance (8:30)-Jan EURO ZONE GDP (10:00 GMT)-4Q F	**8** U.S. ADP Employment Report (8:15)-Feb Productivity (8:30)-4Q F Wholesale Trade (10:00)-Jan F CANADA Housing Starts (8:15)-Feb; Productivity (8:30)-4Q Building Permits (8:30)-Jan JAPAN Current Account-Jan; Trade Balance-Jan; GDP-4Q F Composite Leading Index-Jan P	**9** U.S. Trade Price Indices (8:30)-Feb Financial Accounts (12:00)-4Q CANADA Capacity Utilization (8:30)-4Q New Housing Price Index (8:30)-Jan EURO ZONE ECB Policy Announcement (12:45 GMT)	**10** U.S. Employment Report (8:30)-Feb Treasury Statement (14:00)-Feb CANADA Employment Report (8:30)-Feb U.K. Industrial Production (9:30 GMT)-Jan Trade Balance (9:30 GMT)-Jan
13 JAPAN Machinery Orders-Jan	**14** U.S. PPI (8:30)-Feb CANADA Teranet - National Bank HPI (8:30)-Feb EURO ZONE Industrial Production (10:00 GMT)-Jan	**15** U.S. Empire State Manufacturing Index (8:30)-Mar; CPI (8:30)-Feb Retail Sales (8:30)-Feb; Business Inventories (10:00)-Jan FOMC Meeting (14:00); Foreign Portfolio Flows (16:00)-Jan CANADA National Balance Sheet (8:30)-4Q; MLS Home Sales (9:00)-Feb JAPAN Industrial Production-Jan F U.K. Unemployment Rate (9:30 GMT)-Feb	**16** U.S. Housing Starts & Building Permits (8:30)-Feb Philadelphia Fed Index (8:30)-Mar; JOLTS (10:00)-Jan CANADA International C$ Securities Transactions (8:30)-Jan U.K. Bank of England Policy Announcement (12:00 GMT) EURO ZONE Inflation (10:00 GMT)-Feb	**17** U.S. Industrial Production & Capacity Utilization (9:15)-Feb Consumer Sentiment (10:00)-Mar P Leading Indicators (10:00)-Feb CANADA Manufacturing Shipments (8:30)-Jan EURO ZONE Trade Balance (10:00 GMT)-Jan
20 CANADA Wholesale Trade (8:30)-Jan	**21** U.S. Current Account (8:30)-4Q CANADA Retail Sales (8:30)-Jan U.K. CPI (9:30 GMT)-Feb	**22** U.S. Existing Home Sales (10:00)-Feb EURO ZONE Current Account (9:00 GMT)-Jan	**23** U.S. New Home Sales (10:00)-Feb U.K. Retail Sales (9:30 GMT)-Feb	**24** U.S. Durable Goods Orders (8:30)-Feb P CANADA CPI (8:30)-Feb JAPAN Composite Leading Index-Jan F
27	**28** U.S. Wholesale Trade (8:30)-Feb P S&P Core Logic Case-Shiller Home Price Index (9:00)-Jan Consumer Confidence (10:00)-Mar Richmond Fed Index (10:00)-Mar	**29** U.S. Pending Home Sales Index (10:00)-Feb	**30** U.S. GDP (8:30)-4Q T Corporate Profits (8:30)-4Q CANADA IPPI/RMPI (8:30)-Feb EURO ZONE Business & Consumer Survey (9:00 GMT)-Mar	**31** U.S. Personal Income & Expenditures (8:30)-Feb Chicago PMI (9:45)-Mar; Consumer Sentiment (10:00)-Mar F CANADA GDP (8:30)-Jan; Payroll Employment, SEPH (8:30)-Jan JAPAN Unemployment Rate-Feb CPI, Tokyo-Mar; Industrial Production-Feb P U.K. Current Account (9:30 GMT)-4Q; GDP (9:30 GMT)-4Q F

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Cc:	Greg Lawrence (Scotiabank GBM); Melissa Mooney (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Francesco Battistelli (Scotiabank); Stephen Lepone (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 11/14/2016
Date:	Monday, November 14, 2016 6:52:00 PM
Attachments:	OPG Weekly Indicative Spreads - November 14, 2016.xlsx Ontario Power Generation-Nov-14-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	14-Nov-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	2.18%	1.59%	0.98%	0.30%	0.32%	0.24%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+174	+126	+95	-4	-5	-1
Re-Offered Yield	3.92%	2.85%	1.93%	0.26%	0.27%	0.23%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.96%**	**2.90%**	**2.00%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+159	+111	+80	-4	-5	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	183	135	102	-3	-3	-1
EPCOR (A(L)/-/A-)	162	113	83	-3	-5	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.88%	1.27%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+178	+131
Re-Offered Yield	3.66%	2.58%
Commission (bp)	4.00	5.00
All-in Yield	**3.70%**	**2.63%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+163	+116

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	186	138
EPCOR (A(L)/-/A-)	165	118

Scotiabank
7-Nov-16

	5-year
	1-Sep-21
	0.75%
	0.74%
	+96
	1.70%
	7.00
1.77%	

	5-year
	+81

	5-year
	103
	83

Indicative New Issue Spreads

Monday, November 14, 2016

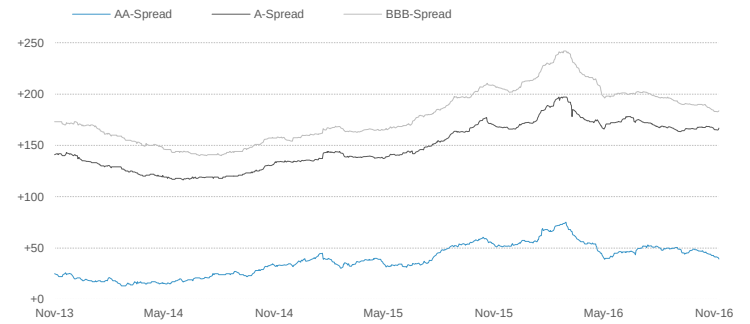
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.98%	0.24%	1.59%	0.32%	2.18%	0.30%
Indicative Spread	**+95**	-1	**+126**	-5	**+174**	-4
Indicative Re-offer Yield	1.93%	0.23%	2.85%	0.27%	3.92%	0.26%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.005%		2.897%		3.964%	
All-in Spread to GoC curve (bp)	+102		+131		+178	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
9-Nov	Laurentian Bank NHA MBS	-/-/-	$311M	5 yr	+80
7-Nov	CHIP Mortgage Trust	AAA(sf)/-/-	$175M	25 yr	+225
7-Nov	Veresen Inc.	BBB/BBB/-	$350M	5 yr	+270
3-Nov	OMERS Realty Corporation	AA(L)/-/-	$230M	5.5 yr	+105
2-Nov	Bank of Montreal	AA/A+/Aa3	$400M	1.5 yr	+27
1-Nov	GMF Canada Leasing Trust	A(sf)/-/A2(sf)	$376M	Various	Various
1-Nov	407 International Inc.	A/A/-	$350M	10.5 yr	+112

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+95**	-1	**+126**	-5	**+174**	-4
Hydro One	A(H)/A3/A	+80	-1	+111	-5	+159	-4
Nova Scotia Power	A(L)/-/BBB+	+102	-1	+135	-3	+183	-3
EPCOR	A(L)/-/A-	+83	0	+113	-5	+162	-3

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Global markets were dominated by the U.S. Presidential election last week, with the initial market sell-off reversing by week's end. Both the GoC and U.S. Treasury curves steepened significantly, with the 10 year Canada benchmark climbing in excess of 30 bps. Despite the election-induced volatility, three new issues came to market in Canada. Veresen printed $350 million 5 year notes at +270, while CHIP Mortgage Trust priced $175 million 25 year secured notes. Laurentian Bank also issued its second NHA MBS offering, following its inaugural issue earlier this year. In the secondary market, activity was moderate with flows heavily skewed towards client buying. Canadian spreads finished the week unchanged to 1 bp wider, while in the U.S., IG27 was 1 bp tighter WoW. At week end, YTD new issue volumes reached $95.1 billion, up 2% YoY.

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Estimates for the week of November 14 – 18

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/14	08:50	**Premier Wynne Speaks at 24th CCPPP Conference**				
11/15	08:30	Teranet - National Bank HPI (y/y)	Oct	--	--	11.7
11/15	09:00	Existing Home Sales (m/m)	Oct	--	--	0.8
11/16	08:30	Manufacturing Shipments (m/m)	Sep	-0.5	--	1.0
11/16	11:50	**Bank of Canada's Lane speaks in Waterloo, Ontario**				
11/17	07:30	**CMHC President Siddall Speaks in London**				
11/17	08:30	International Securities Transactions (C$ bn)	Sep	--	--	12.7
11/17	10:30	**Bank of Canada releases Review collection of research papers**				
11/18	08:30	Core X8 CPI (m/m)	Oct	0.3	--	0.2
11/18	08:30	Core X8 CPI (y/y)	Oct	1.8	--	1.8
11/18	08:30	CPI, All items (m/m)	Oct	0.2	--	0.1
11/18	08:30	CPI, All items (y/y)	Oct	1.4	--	1.3
11/18	08:30	CPI, All items (index)	Oct	--	--	128.8
11/18	08:30	CPI SA, All items (m/m)	Oct	--	--	0.2
11/18	08:30	Core CPI SA, All items (m/m)	Oct	--	--	0.1

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/14	13:20	**Fed's Kaplan Speaks in Wichita Falls**				
11/14	17:00	**Fed's Lacker Speaks at Washington College in Chestertown, MD**				
11/14	18:30	**Fed's Williams Speaks in San Francisco on Panel**				
11/15	07:30	**Fed's Rosengren Speaks to Portland, Maine Chamber of Commerce**				
11/15	08:30	**Empire State Manufacturing Index**	Nov	--	-2.0	-6.8
11/15	08:30	Export Prices (m/m)	Oct	--	0.3	0.1
11/15	08:30	Import Prices (m/m)	Oct	--	0.3	0.1
11/15	08:30	Retail Sales (m/m)	Oct	0.5	0.6	0.6
11/15	08:30	Retail Sales ex. Autos (m/m)	Oct	0.5	0.5	0.5
11/15	09:30	**Defense One holds a Leadership briefing.**				
11/15	10:00	Business Inventories (m/m)	Sep	--	0.2	0.2
11/15	13:30	**Fed's Fischer Speaks at Brookings Instituton Market Liquidity**				
11/16	03:00	**Fed's Bullard Speaks in London on `Monetary Policy after QE'**				
11/16	07:00	MBA Mortgage Applications (w/w)	NOV 11	--	--	-1.2
11/16	07:45	**Fed's Kashkari Speaks on Too Big to Fail in New York**				
11/16	08:30	PPI (m/m)	Oct	--	0.3	0.3
11/16	08:30	PPI ex. Food & Energy (m/m)	Oct	--	0.2	0.2
11/16	09:15	Capacity Utilization (%)	Oct	--	75.6	75.4
11/16	09:15	Industrial Production (m/m)	Oct	0.2	0.2	0.1
11/16	11:00	**Treasury Department; Internal Revenue Service (IRS) Meeting**				
11/16	17:30	**Fed's Harker Speaks in Philadelphia on Purpose of Federal Rese**				
11/16	10:00	NAHB Housing Market Index	Nov	--	62.0	63.0
11/16	16:00	Total Net TIC Flows (US$ bn)	Sep	--	--	73.8
11/16	16:00	Net Long-term TIC Flows (US$ bn)	Sep	--	--	48.3
11/17	08:30	Building Permits (000s a.r.)	Oct	--	1190	1225
11/17	08:30	CPI (m/m)	Oct	0.3	0.4	0.3
11/17	08:30	CPI (y/y)	Oct	1.5	1.6	1.5
11/17	08:30	CPI (index)	Oct	--	--	241.4
11/17	08:30	CPI ex. Food & Energy (m/m)	Oct	0.2	0.2	0.1
11/17	08:30	CPI ex. Food & Energy (y/y)	Oct	2.2	2.2	2.2
11/17	08:30	Housing Starts (000s a.r.)	Oct	1160	1164	1047
11/17	08:30	Housing Starts (m/m)	Oct	--	11.2	-9.0
11/17	08:30	Initial Jobless Claims (000s)	NOV 12	260	260	265
11/17	08:30	Continuing Claims (000s)	NOV 5	2050	2025	2026
11/17	08:30	Philadelphia Fed Index	Nov	10	8.0	9.7
11/17	16:45	**ECB's Praet speaks in New York**				
11/18		**Commerce Department (DOC); Meetings**				
11/18	05:30	**Fed's Bullard, SNB's Maechler Speak on Panel in Frankfurt**				
11/18	09:30	**Fed's George Speaks in Dallas**				
11/18	10:00	Leading Indicators (m/m)	Oct	--	0.1	0.2

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Cc:	Greg Lawrence (Scotiabank GBM); Melissa Mooney (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Francesco Battistelli (Scotiabank); Stephen Lepone (Scotiabank GBM); Michael Costakos (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 11/7/2016
Date:	Monday, November 07, 2016 6:15:12 PM
Attachments:	OPG Weekly Indicative Spreads - November 7, 2016.xlsx Ontario Power Generation-Nov-7-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	7-Nov-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.88%	1.27%	0.74%	0.03%	0.04%	0.03%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+178	+131	+96	-2	-1	-1
Re-Offered Yield	3.66%	2.58%	1.70%	0.01%	0.03%	0.02%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.70%**	**2.63%**	**1.77%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+163	+116	+81	-2	-1	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	186	138	103	0	0	0
EPCOR (A(L)/-/A-)	165	118	83	-1	0	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.85%	1.23%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+180	+132
Re-Offered Yield	3.65%	2.55%
Commission (bp)	4.00	5.00
All-in Yield	**3.69%**	**2.60%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+165	+117

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	186	138
EPCOR (A(L)/-/A-)	166	118

Scotiabank
31-Oct-16

5-year
1-Sep-21
0.75%
0.71%
+97
1.68%
7.00
1.75%

5-year
+82

5-year
103
83

Indicative New Issue Spreads

Monday, November 07, 2016

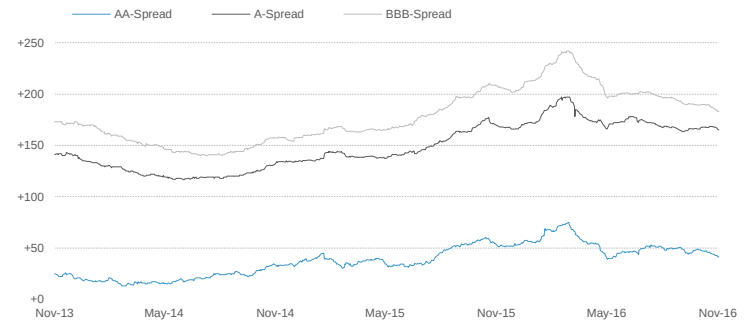
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.74%	0.03%	1.27%	0.04%	1.88%	0.03%
Indicative Spread	**+96**	-1	**+131**	-1	**+178**	-2
Indicative Re-offer Yield	1.70%	0.02%	2.58%	0.03%	3.66%	0.01%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.771%		2.629%		3.696%	
All-in Spread to GoC curve (bp)	+103		+136		+182	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
3-Nov	OMERS Realty Corporation	AA(L)/-/-	$230M	5.5 yr	+105
2-Nov	Bank of Montreal	AA/A+/Aa3	$400M	1.5 yr	+27
1-Nov	GMF Canada Leasing Trust	Various	$376M	Various	Various
1-Nov	407 International Inc.	A/A/-	$350M	10.5 yr	+112
31-Oct	H&R Real Estate Investment Trust	BBB(H)/-/-	$200M	5.5 yr	+215
24-Oct	Bank of Montreal	AA/A+/Aa3	$2,000M	5 yr	+94
20-Oct	Wells Fargo & Company	AA/A/A2	$1,000M	7 yr	+160

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+96**	-1	**+131**	-1	**+178**	-2
Hydro One	A(H)/A3/A	+81	-1	+116	-1	+163	-2
Nova Scotia Power	A(L)/-/BBB+	+103	0	+138	0	+186	0
EPCOR	A(L)/-/A-	+83	0	+118	0	+165	-1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market was steady last week, with five issuers combining for $1.6 billion of new supply. In the Financial space, BMO printed a $400 million 18-month FRN while OMERS issued $230 million 5.5 year notes. From the real estate sector, H&R REIT priced $200 million 5.5 year notes. 407 International also came to market, printing $350 million 10.5 year notes. Markets were focused on the FOMC meeting along with U.S. Non-Farm Payrolls. The Fed held rates unchanged and provided few clues as to its December hike decision. Payrolls were a slight miss versus consensus forecasts, but Canadian jobs surprised to the upside (albeit solely due to a surge in part-time jobs). In secondary markets, two-way flows remained steady, with Canadian corporate spreads ultimately finishing the week ~3 bps wider. At week end, YTD new issue volumes reached $94.2 billion, just ahead of 2015's pace.

CONTACT INFORMATION

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Estimates for the week of November 7 – 11

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/08	08:15	Housing Starts (000s a.r.)	Oct	195.0	--	219.3
11/08	08:30	Building Permits (m/m)	Sep	--	--	10.4
11/08	11:20	**Bank of Canada's Schembri speaks in Halifax**				
11/08	12:00	**Minister of Finance Sousa Speaks on Ontario's Economic Plan**				
11/10	08:30	New Housing Price Index (m/m)	Sep	--	--	0.2
11/11	10:50	**Bank of Canada's Poloz joins panel talk in Santiago**				

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/07	15:00	Consumer Credit (US$ bn m/m)	Sep	--	17.5	25.9
11/08	10:00	JOLTS Job Openings (000s)	Sep	--	--	5443
11/08	07:45	**Fed's Evans Speaks on Economy and Policy in New York**				
11/08	12:20	**Fed's Evans Speaks on Economy and Policy in New York**				
11/08		**US Presidential Election**				
11/09	07:00	MBA Mortgage Applications (w/w)	NOV 4	--	--	-1.2
11/09	10:00	Wholesale Inventories (m/m)	Sep F	--	0.2	0.2
11/09	13:30	**Fed's Kashkari Speaks in Eau Claire, Wisconsin**				
11/09	21:00	**Fed's Williams Speaks on Economic Outlook in San Francisco**				
11/10	08:30	Initial Jobless Claims (000s)	NOV 5	260	--	265
11/10	08:30	Continuing Claims (000s)	OCT 29	2025	--	2026
11/10	14:00	Treasury Budget (US$ bn)	Oct	--	-84.4	33.4
11/10	09:15	**Fed's Bullard Speaks on U.S. Economic Outlook in St. Louis**				
11/11	10:00	U. of Michigan Consumer Sentiment	Nov P	86.5	87.0	87.2

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Cc:	Greg Lawrence (Scotiabank GBM); Melissa Mooney (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Francesco Battistelli (Scotiabank); Stephen Lepone (Scotiabank GBM); Michael Costakos (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 10/31/2016
Date:	Monday, October 31, 2016 6:36:08 PM
Attachments:	OPG Weekly Indicative Spreads - October 31, 2016.xlsx Ontario Power Generation-Oct-31-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	31-Oct-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.85%	1.23%	0.71%	0.03%	0.05%	0.04%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+180	+132	+97	1	0	0
Re-Offered Yield	3.65%	2.55%	1.68%	0.04%	0.05%	0.04%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.69%**	**2.60%**	**1.75%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+165	+117	+82	1	0	0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	186	138	103	1	0	0
EPCOR (A(L)/-/A-)	166	118	83	1	0	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.82%	1.18%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+179	+132
Re-Offered Yield	3.61%	2.50%
Commission (bp)	4.00	5.00
All-in Yield	**3.65%**	**2.55%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+164	+117

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	185	138
EPCOR (A(L)/-/A-)	165	118

Scotiabank
24-Oct-16

	5-year
	1-Sep-21
	0.75%
	0.67%
	+97
	1.64%
	7.00
	1.71%

	5-year
	+82

	5-year
	103
	83

Indicative New Issue Spreads

Monday, October 31, 2016

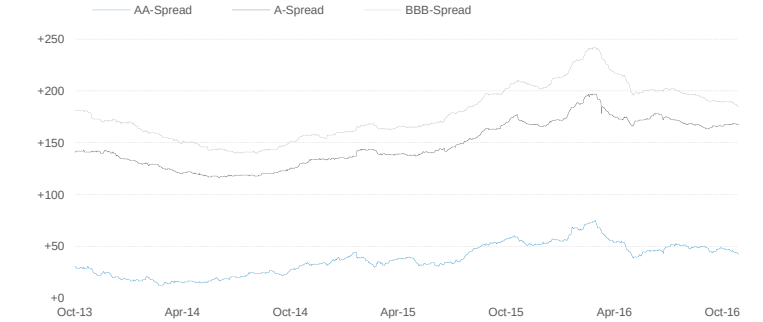
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.71%	0.04%	1.23%	0.05%	1.85%	0.03%
Indicative Spread	**+97**	0	**+132**	0	**+180**	1
Indicative Re-offer Yield	1.68%	0.04%	2.55%	0.05%	3.65%	0.04%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.747%		2.605%		3.689%	
All-in Spread to GoC curve (bp)	+104		+137		+184	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
24-Oct	Bank of Montreal	AA/A+/Aa3	$2,000M	5 yr	+94
20-Oct	Wells Fargo & Company	AA/A/A2	$1,000M	7 yr	+160
18-Oct	Plenary Health Vaughan LP	-/-/A3	$278M	33 yr	n.a.
13-Oct	Merrill Lynch NHA MBS	-/-/-	$755M	5 yr	+80
12-Oct	BMW Canada Inc.	-/A+/A2	$300M	4 yr	+107
11-Oct	Central 1 Credit Union	A/A-/-	$200M	5 yr	+230
6-Oct	Calgary Fuel Facilities Corp	-/-/A2	$90M	30 yr	+188

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+97**	0	**+132**	0	**+180**	1
Hydro One	A(H)/A3/A	+82	0	+117	0	+165	1
Nova Scotia Power	A(L)/-/BBB+	+103	0	+138	0	+186	1
EPCOR	A(L)/-/A-	+83	0	+118	0	+166	1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market was quiet last week, with one new issue coming to market. BMO was the lone issuer, pricing $2 billion 5 year Deposit Notes at +94. Global markets remained stable for the better part of the week, with mixed Q3 earnings commanding investor focus. Risk assets were also impacted Friday by news of the FBI reopening the Hillary Clinton email investigation. In secondary markets, trading activity continued to be robust, and was skewed toward client buying. Canadian spreads finished the week mixed, with some higher-beta BBB names outperforming. This week, eyes will be on the FOMC Wednesday for potential clues as to a potential December rate hike. YTD new issue volumes finished the week at $92.7 billion, just ahead of 2015's pace.

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Estimates for the week of October 31 – November 4

CANADA

Date	Time	Event				
10/31	08:30	IPPI (m/m)	Sep	--	--	-0.5
10/31	08:30	Raw Materials Price Index (m/m)	Sep	--	--	-0.7
11/01	08:30	Real GDP (m/m)	Aug	0.1	--	0.5
11/01		**Bank of Canada's Poloz speaks in Vancouver (11:45)**				
11/02		**Bank of Canada's Wilkins Speaks on OSC Panel (13:15)**				
11/03		**Bank of Canada's Poloz Speaks at Oshawa Walk of Fame (20:35)**				
11/04	08:30	Employment (000s m/m)	Oct	-10	--	67.2
11/04	08:30	Merchandise Trade Balance (C$ bn)	Sep	-1.5	--	-1.9
11/04	08:30	Unemployment Rate (%)	Oct	7.1	--	7.0

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
10/31	08:30	PCE Deflator (m/m)	Sep	0.2	0.2	0.1
10/31	08:30	PCE Deflator (y/y)	Sep	1.2	1.2	1.0
10/31	08:30	PCE ex. Food & Energy (m/m)	Sep	0.1	0.1	0.2
10/31	08:30	PCE ex. Food & Energy (y/y)	Sep	1.7	1.7	1.7
10/31	08:30	Personal Spending (m/m)	Sep	0.4	0.4	0.0
10/31	08:30	Personal Income (m/m)	Sep	0.3	0.4	0.2
10/31	09:45	Chicago PMI	Oct	--	54.0	54.2
11/01	10:00	Construction Spending (m/m)	Sep	0.3	0.5	-0.7
11/01	10:00	ISM Manufacturing Index	Oct	51.7	51.7	51.5
11/01		Domestic Vehicle Sales (mn a.r.)	Oct	--	13.5	13.9
11/01		Total Vehicle Sales (mn a.r.)	Oct	17.4	17.3	17.7
11/02	07:00	MBA Mortgage Applications (w/w)	OCT 28	--	--	0.6
11/02	08:15	ADP Employment Report (000s m/m)	Oct	160	157.5	154.0
11/02		**The Federal Open Market Committee (FOMC) holds a closed meeting (9:00)**				
11/02	14:00	**FOMC Interest Rate Meeting (%)**	**Nov 2**	**0.50**	**0.50**	**0.50**
11/03	08:30	Initial Jobless Claims (000s)	OCT 29	260	255.0	260.0
11/03	08:30	Continuing Claims (000s)	OCT 22	2050	2052.0	2057.0
11/03	08:30	Productivity (q/q a.r.)	3Q P	1.5	1.6	-0.6
11/03	08:30	Unit Labor Costs (q/q a.r.)	3Q P	1.5	1.5	4.3
11/03	10:00	Factory Orders (m/m)	Sep	0.3	0.4	0.2
11/03	10:00	ISM Non-Manufacturing Composite	Oct	56.5	56.0	57.1
11/03		**ECB's Coeure speaks at Harvard University (17:00)**				
NOV 03-04		**IMF Conference Macroeconomics after the Great Recession**				
11/04	08:30	Average Hourly Earnings (m/m)	Oct	--	0.3	0.2
11/04	08:30	Average Weekly Hours	Oct	--	34.4	34.4
11/04	08:30	Nonfarm Employment Report (000s m/m)	Oct	170	169.0	156.0
11/04	08:30	Household Employment Report (000s m/m)	Oct	--	--	354.0
11/04	08:30	Trade Balance (US$ bn)	Sep	-41.5	-41.8	-40.7
11/04	08:30	Unemployment Rate (%)	Oct	5.0	4.9	5.0
11/04		**Fed's Lockhart to Speak to Realtors in Orlando (9:40)**				
11/04		**ECB's Constancio Speaks in Chicago (13:00)**				
11/04		**Fed's Kashkari Speaks in Eau Claire, Wisconsin (13:30)**				
11/04		**Fed's Fischer Speaks at IMF Event in Washington (16:00)**				

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 10/11/2016
Date:	Tuesday, October 11, 2016 7:11:28 PM
Attachments:	OPG Weekly Indicative Spreads - October 11, 2016.xlsx Ontario Power Generation-Oct-11-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	11-Oct-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.83%	1.23%	0.77%	0.16%	0.18%	0.13%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+182	+134	+99	1	0	0
Re-Offered Yield	3.65%	2.57%	1.76%	0.17%	0.18%	0.13%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.69%**	**2.62%**	**1.83%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+167	+119	+84	1	0	0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	190	141	106	0	1	1
EPCOR (A(L)/-/A-)	169	121	86	0	-4	-4

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.67%	1.05%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+181	+134
Re-Offered Yield	3.48%	2.39%
Commission (bp)	4.00	5.00
All-in Yield	**3.52%**	**2.44%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+166	+119

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	190	140
EPCOR (A(L)/-/A-)	169	125

Scotiabank
4-Oct-16

5-year
1-Sep-21
0.75%
0.64%
+99
1.63%
7.00
1.70%

5-year
+84

5-year
105
90

Indicative New Issue Spreads

Tuesday, October 11, 2016

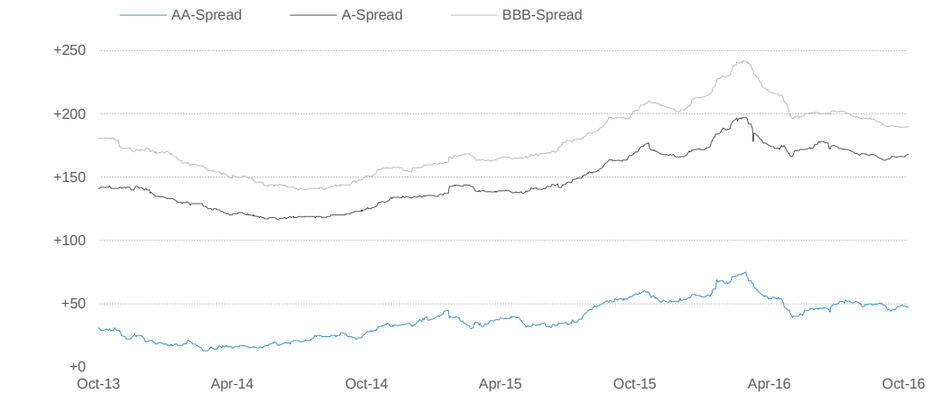
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		3.50% 1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.77%	0.13%	1.23%	0.18%	1.83%	0.16%
Indicative Spread	**+99**	0	**+134**	0	**+182**	1
Indicative Re-offer Yield	1.76%	0.13%	2.57%	0.18%	3.65%	0.17%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.826%		2.622%		3.695%	
All-in Spread to GoC curve (bp)	+106		+139		+186	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
6-Oct	Kingston Solar LP	BBB/-/-	$633M	19 yr	+237
6-Oct	MBARC Credit Canada Inc.	AAA/-/Aaa	$507M	Various	Various
5-Oct	Bank of Nova Scotia	AA/A+/Aa3	$525M	1 yr	+19
4-Oct	University of Ottawa	AA(L)/-/Aa2	$200M	40 yr	+152
4-Oct	Lower Mattagami Energy	A(H)/-/A2	$220M	10 yr	+124
29-Sep	Nissan Canada	A(L)/-/A3	$500M	3 yr	+107
23-Sep	Air Canada	-/B+/Ba3	$200M	7 yr	+395

COMPARABLES	Ratings DBRS/Moody's/S&P	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+99**	0	**+134**	0	**+182**	1
Hydro One	A(H)/A3/A	+84	0	+119	0	+167	1
Nova Scotia Power	A(L)/-/BBB+	+106	1	+141	1	+190	0
EPCOR	A(L)/-/A-	+86	-4	+121	-4	+169	0

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Global markets lacked a clear direction for most of last week with sentiment focused on Friday's U.S. non-farm payrolls release. Payrolls missed slightly, but were partially offset by upward revisions to August figures. Meanwhile, Canadian jobs data surprised to the upside, with the economy adding 67k jobs in September. The Canadian corporate credit market saw $2.2 billion priced, including a BNS 1 year FRN which came at 1M CDOR +19. Gaz Metro printed $125 million 30s at +162, and Kingston Solar LP completed a $633 million amortizer. In secondary trading, flows were relatively active, with subdued primary activity leading to client buying. Canadian corporate spreads finished the week a few bps wider, underperforming the U.S., where IG27 closed ~3bps tighter. At week end, YTD new issue volumes reached $88 billion, down 1% YoY.

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Estimates for the week of October 10 – 14

CANADA

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
OCT 7-8		**FRB's Fischer and BOC's Wilkins Speak at IFF Annual Meeting**				
10/11	08:15	Housing Starts (000s a.r.)	Sep	195.0	--	182.4
10/13	08:30	New Housing Price Index (m/m)	Aug	--	--	0.4
10/13	08:30	Teranet - National Bank HPI (y/y)	Sep	--	--	11.4

UNITED STATES

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
OCT 6-8		**2016 IIF Annual Meeting**				
10/09		**IMF Director Lagarde Interviewed By Michael Lewis (10:00)**				
10/09		**Second presidential debate, Washington University in St. Louis**				
10/10		**Fed's Evans Speaks on Economy and Policy in Sydney (21:30)**				
OCT 11-14		Treasury Budget (US$ bn)	Sep	--	--	-107
10/12	07:00	MBA Mortgage Applications (w/w)	OCT 7	--	--	2.9
10/12	10:00	JOLTS Job Openings (000s)	Aug	--	--	5871.0
10/12		**Fed's Dudley Speaks at Fireside Chat in Albany (8:00)**				
10/12		**U.S. Fed Releases Minutes from Sept. 20-21 FOMC Meeting (14:00)**				
OCT 12-13		**Esther George, Keynote, 16th Annual Chicago Payments Symposium**				
10/13	08:30	Export Prices (m/m)	Sep	--	0.1	-0.2
10/13	08:30	Import Prices (m/m)	Sep	--	0.1	-0.2
10/13	08:30	Initial Jobless Claims (000s)	OCT 8	250	256	254
10/13	08:30	Continuing Claims (000s)	OCT 1	--	2081	2062
10/13	12:15	**Fed's Harker Speaks on Economic Outlook in Philadelphia (12:15)**				
10/13	21:00	**Fed's Kashkari Speaks at Town Hall in Missoula, Montana (21:00)**				
10/14	08:30	PPI (m/m)	Sep	--	0.2	0.0
10/14	08:30	PPI ex. Food & Energy (m/m)	Sep	--	0.1	0.1
10/14	08:30	Retail Sales (m/m)	Sep	0.6	0.4	-0.3
10/14	08:30	Retail Sales ex. Autos (m/m)	Sep	0.4	0.5	-0.1
10/14	10:00	Business Inventories (m/m)	Aug	--	0.1	0.0
10/14	10:00	U. of Michigan Consumer Sentiment	Oct P	92.0	92.1	91.2
10/14		**Fed's Rosengren Gives Opening Remarks at Boston Fed Conference (8:30)**				
10/14		**Fed Chair Yellen Speaks at Boston Fed Conference (12:00)**				

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 10/03/2016
Date:	Monday, October 03, 2016 7:37:29 PM
Attachments:	OPG Weekly Indicative Spreads - October 3, 2016.xlsx Ontario Power Generation-Oct-3-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	3-Oct-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.67%	1.05%	0.64%	0.02%	0.03%	0.05%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+181	+134	+99	4	2	2
Re-Offered Yield	3.48%	2.39%	1.63%	0.06%	0.05%	0.07%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.52%**	**2.44%**	**1.70%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+166	+119	+84	4	2	2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	190	140	105	0	0	0
EPCOR (A(L)/-/A-)	169	125	90	0	0	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.65%	1.02%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+177	+132
Re-Offered Yield	3.42%	2.34%
Commission (bp)	4.00	5.00
All-in Yield	**3.46%**	**2.39%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+162	+117

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	190	140
EPCOR (A(L)/-/A-)	169	125

Scotiabank
26-Sep-16

	5-year
	1-Sep-21
	0.75%
	0.59%
	+97
	1.56%
	7.00
1.63%	

	5-year
	+82

	5-year
	105
	90

Indicative New Issue Spreads

Monday, October 03, 2016

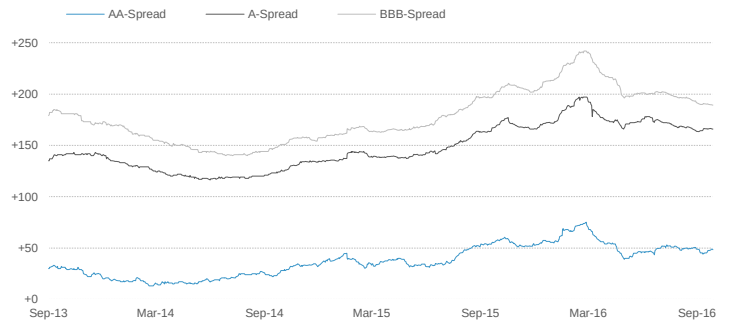
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.64%	0.05%	1.05%	0.03%	1.67%	0.02%
Indicative Spread	**+99**	2	**+134**	2	**+181**	4
Indicative Re-offer Yield	1.63%	0.07%	2.39%	0.05%	3.48%	0.06%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.697%		2.436%		3.522%	
All-in Spread to GoC curve (bp)	+106		+139		+185	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
29-Sep	Nissan Canada	A(L)/-/A3	$500M	3 yr	+107
23-Sep	Air Canada	-/B+/Ba3	$200M	7 yr	+395
22-Sep	First Capital Realty Inc.	BBB(H)/-/Baa2	$150M	10 yr	+217
16-Sep	REAL-T	BBB(L)/-/-	$404M	Various	Various
15-Sep	Home Trust Company	AAA/AAA/Aaa	$296M	5 yr	+89
15-Sep	Canexus Corporation	-/-/-	$110M	7NC3	+695
13-Sep	Plenary Infrastructure Calgary LP	-/-/-	$57M	32 yr	+219

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+99**	2	**+134**	2	**+181**	4
Hydro One	A(H)/A3/A	+84	2	+119	2	+166	4
Nova Scotia Power	A(L)/-/BBB+	+105	0	+140	0	+190	0
EPCOR	A(L)/-/A-	+90	0	+125	0	+169	0

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Heightened volatility characterized global financial markets last week. Concerns over the European banking sector commanded investor focus and put equities in the red to start the week. However, stocks were lifted along with oil later in the week as OPEC agreed to its first production cut in 8 years. On Friday, Canadian GDP for July came in above expectations, growing 0.5% MoM. On the primary market front, Canadian bond markets were quiet, with just one new issue coming to market. Nissan Canada Financial Services printed $500 million 3 year notes, marking its inaugural deal in the Canadian market. At month end, September issuance totaled $8.7 billion, and YTD volumes continue to closely track 2015's pace. In secondary markets, flows were modest, with a slight skew towards client selling. Both Canadian and U.S. corporate spreads finished the week a few bps wider, on average.

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Estimates for the week of October 3 – 7

CANADA

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
10/05	08:30	Merchandise Trade Balance (C$ bn)	Aug	-3.2	--	-2.5
10/05		**Former Statistics Canada Chief speaks in Toronto (12:00)**				
10/06	08:30	Building Permits (m/m)	Aug	--	--	0.8
10/06		**BoC's Wilkins Speaks in Trois-Rivieres, Quebec (11:35)**				
10/07	08:30	Employment (000s m/m)	Sep	0.0	--	26.2
10/07	08:30	Unemployment Rate (%)	Sep	7.1	--	7.0
10/07	10:30	BoC Senior Loan Officer Survey	3Q	--	--	23.9
10/07	10:30	Business Outlook Future Sales	3Q	--	--	5.0
10/07		**Business Outlook Future Sales (10:30)**				
10/07		**BoC Senior Loan Officer Survey (10:30)**				
10/07		**BoC's Wilkins Speaks on Panel in Washington (16:00)**				

UNITED STATES

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
10/03	10:00	Construction Spending (m/m)	Aug	0.2	0.3	0.0
10/03	10:00	ISM Manufacturing Index	Sep	50.5	50.2	49.4
10/03		Domestic Vehicle Sales (mn a.r.)	Sep	--	--	13.1
10/03		Total Vehicle Sales (mn a.r.)	Sep	17.3	17.4	16.9
10/04		**Fed's Lacker Speaks at West Virginia Economic Outlook Meeting (8:05)**				
10/04	10:00	IBD/TIPP Economic Optimism Index	Oct	--	--	46.7
10/04		**Fed's Evans Speaks on Economy and Policy in Auckland, NZ (20:40)**				
10/04		**Vice presidential debate: Longwood University, Farmville, VA**				
10/05	07:00	MBA Mortgage Applications (w/w)	SEP 30	--	--	-0.7
10/05	08:15	ADP Employment Report (000s m/m)	Sep	170	160.0	176.9
10/05	08:30	Trade Balance (US$ bn)	Aug	-41.0	-41.5	-39.5
10/05		**Fed's Kashkari Gives Opening Remarks at Development Conference (9:30)**				
10/05	10:00	Factory Orders (m/m)	Aug	-0.2	-0.5	1.9
10/05	10:00	ISM Non-Manufacturing Composite	Sep	52.5	53.0	51.4
10/05		**Fed's Lacker to Speak at Marshall University (13:00)**				
10/06	08:30	Initial Jobless Claims (000s)	OCT 1	255	260	254
10/06	08:30	Continuing Claims (000s)	SEP 24	--	2129	2062
OCT 6-8		**2016 IIF Annual Meeting**				
10/07	08:30	Nonfarm Employment Report (000s m/m)	Sep	190	175	151
10/07	08:30	Unemployment Rate (%)	Sep	4.9	4.9	4.9
10/07	08:30	Household Employment Report (000s m/m)	Sep	--	--	97.0
10/07	08:30	Average Hourly Earnings (m/m)	Sep	--	0.2	0.1
10/07	08:30	Average Weekly Hours	Sep	--	34.4	34.3
10/07		**Fed's Fischer Speaks in Washington (10:30)**				
10/07		**Fed's Mester Speaks in New York (12:45)**				
10/07		**Fed's George Speaks in Washington (15:00)**				
10/07	15:00	Consumer Credit (US$ bn m/m)	Aug	--	16.8	17.7
		Fed's Brainard Speaks in Washington (16:00)				
		IMF Panel on Trade and Growth (16:15)				

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Cc:	Greg Lawrence (Scotiabank GBM); Melissa Mooney (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Francesco Battistelli (Scotiabank); Stephen Lepone (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 09/26/2016
Date:	Monday, September 26, 2016 4:29:48 PM
Attachments:	OPG Weekly Indicative Spreads - Sep 26, 2016.xlsx Ontario Power Generation-Sep-26-2016.pdf estimates.pdf

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Good Afternoon,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

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Bank Name	Scotiabank
Date	26-Sep-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.65%	1.02%	0.59%	-0.17%	-0.20%	-0.15%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+177	+132	+97	-2	-1	-1
Re-Offered Yield	3.42%	2.34%	1.56%	-0.19%	-0.21%	-0.16%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.46%**	**2.39%**	**1.63%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+162	+117	+82	-2	-1	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	190	140	105	0	0	0
EPCOR (A(L)/-/A-)	169	125	90	1	-2	-1

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.82%	1.22%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+179	+133
Re-Offered Yield	3.61%	2.55%
Commission (bp)	4.00	5.00
All-in Yield	**3.65%**	**2.60%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+164	+118

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	190	140
EPCOR (A(L)/-/A-)	168	127

Scotiabank
19-Sep-16

	5-year
	1-Sep-21
	0.75%
	0.74%
	+98
	1.72%
	7.00
	1.79%

	5-year
	+83

	5-year
	105
	91

Indicative New Issue Spreads

Monday, September 26, 2016

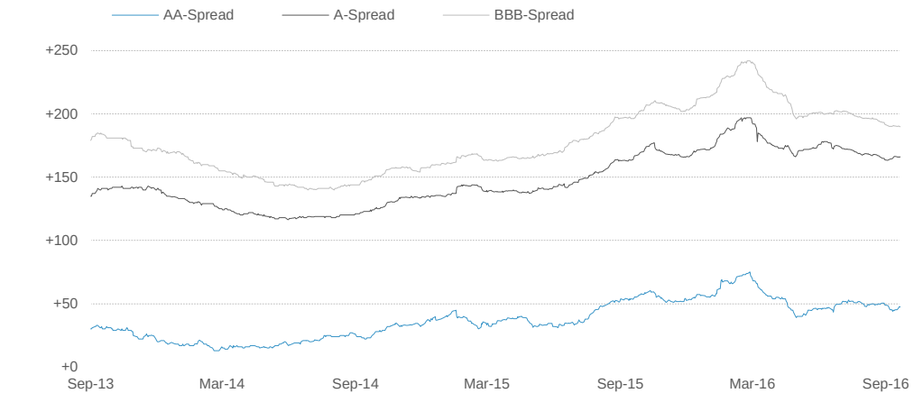
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		3.50% 1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.59%	-0.15%	1.02%	-0.20%	1.65%	-0.17%
Indicative Spread	**+97**	-1	**+132**	-1	**+177**	-2
Indicative Re-offer Yield	1.56%	-0.16%	2.34%	-0.21%	3.42%	-0.19%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.629%		2.391%		3.463%	
All-in Spread to GoC curve (bp)	+104		+137		+181	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
23-Sep	Air Canada	-/B+/Ba3	$200M	7 yr	+395
22-Sep	First Capital Realty Inc.	BBB(H)/-/Baa2	$150M	10 yr	+217
16-Sep	REAL-T	Various	$404M	Various	Various
15-Sep	Home Trust Company	AAA/AAA/Aaa	$296M	5 yr	+89
15-Sep	Canexus Corporation	-/-/-	$110M	7NC3	+695
13-Sep	Plenary Infrastructure Calgary LP	-/-/-	$57M	32 yr	+219
13-Sep	Mountain View Partners GP	A(L)/-/A3	$381M	35 yr	+215

COMPARABLES	Ratings DBRS/Moody's/S&P	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+97**	-1	**+132**	-1	**+177**	-2
Hydro One	A(H)/A3/A	+82	-1	+117	-1	+162	-2
Nova Scotia Power	A(L)/-/BBB+	+105	0	+140	0	+190	0
EPCOR	A(L)/-/A-	+90	-1	+125	-2	+169	1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Primary activity in the Canadian corporate bond market was light last week as central bank activity commanded investor focus. The Fed delayed raising rates for the sixth time running, in line with expectations. Meanwhile, the Bank of Japan kept its benchmark rate unchanged and adjusted its asset purchase program to target lower government bond yields. In terms of primary bond market activity, two new issues priced in the Canadian market. First Capital Realty re-opened its May 2026 maturity to raise $150 million. Also, high yield issuer Air Canada printed $200 million 7 year senior secured notes. Secondary markets were active, with solid two-way flows seen (skewed towards better buying). Canadian corporate spreads finished the week 2-4 bps tighter, underperforming the U.S., where IG26 was 5 bps better on the week.

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Estimates for the week of September 26 – 30

CANADA

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
09/26		**Bank of Canada's Poloz Lecture in Washington State (19:00)**				
09/30	08:30	IPPI (m/m)	Aug	--	--	0.2
09/30	08:30	Raw Materials Price Index (m/m)	Aug	--	--	-2.7
09/30	08:30	Real GDP (m/m)	Jul	0.2	--	0.6

UNITED STATES

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
09/26	10:00	New Home Sales (000s a.r.)	Aug	600.0	594.5	654.0
09/26	10:30	Dallas Fed. Manufacturing Activity	Sep	--	-3.0	-6.2
09/26		**Fed's Kaplan Speaks in San Antonio Moderated Q&A (13:00)**				
09/26		**First presidential debate**				
09/27	09:00	S&P/Case-Shiller Home Price Index (m/m)	Jul	--	-0.1	-0.1
09/27	09:00	S&P/Case-Shiller Home Price Index (y/y)	Jul	--	5.0	5.1
09/27	10:00	Consumer Confidence Index	Sep	100.0	98.8	101.1
09/27	10:00	Richmond Fed Manufacturing Index	Sep	--	-2.0	-11.0
09/28	07:00	MBA Mortgage Applications (w/w)	SEP 23	--	--	-7.3
09/28	08:30	Durable Goods Orders (m/m)	Aug P	-1.5	-1.0	4.4
09/28	08:30	Durable Goods Orders ex. Trans. (m/m)	Aug P	-0.7	-0.5	1.3
09/28		**Fed's Bullard Makes Introductory Remarks on Community Banking (10:10)**				
09/28		**Fed's Evans Speaks on Community Banking in St. Louis (13:30)**				
09/28		**Fed's Mester Speaks on Economic Outlook and Policy (16:35)**				
09/28		**Fed's George Speaks to Minority Bankers in Kansas City (19:15)**				
09/29		**Fed's Harker Speaks in Dublin, Ireland (5:00)**				
09/29	08:30	GDP (q/q a.r.)	2Q T	1.2	1.3	1.1
09/29	08:30	GDP Deflator (q/q a.r.)	2Q T	--	2.3	2.3
09/29	08:30	Initial Jobless Claims (000s)	SEP 24	260	--	252
09/29	08:30	Continuing Claims (000s)	SEP 17	--	--	2113
09/29	08:30	Wholesale Inventories (m/m)	Aug P	--	0.0	0.0
09/29		**Fed's Lockhart Speaks to the Future of Florida Forum (8:50)**				
09/29	10:00	Pending Home Sales (m/m)	Aug	0.0	-0.3	1.3
09/29		**Fed's Powell Speaks on Community Banking in St. Louis (10:00)**				
09/29		**Fed's Kashkari Speaks at Town Hall in South Dakota (14:00)**				
09/29		**Yellen addresses minority banking conference via video link (16:00)**				
09/30	08:30	PCE Deflator (m/m)	Aug	0.1	0.1	0.0
09/30	08:30	PCE Deflator (y/y)	Aug	0.9	0.9	0.8
09/30	08:30	PCE ex. Food & Energy (m/m)	Aug	0.2	0.2	0.1
09/30	08:30	PCE ex. Food & Energy (y/y)	Aug	1.7	1.7	1.6
09/30	08:30	Personal Spending (m/m)	Aug	0.1	0.2	0.3
09/30	08:30	Personal Income (m/m)	Aug	0.1	0.2	0.4
09/30	09:45	Chicago PMI	Sep	--	52.0	51.5
09/30	10:00	U. of Michigan Consumer Sentiment	Sep F	--	90.0	89.8

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Cc:	Greg Lawrence (Scotiabank GBM); Melissa Mooney (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Francesco Battistelli (Scotiabank); Stephen Lepone (Scotiabank GBM); Michael Costakos (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 09/19/2016
Date:	Monday, September 19, 2016 6:56:12 PM
Attachments:	OPG Weekly Indicative Spreads - Sep 19, 2016.xlsx Ontario Power Generation-Sep-19-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	19-Sep-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.82%	1.22%	0.74%	0.03%	0.04%	0.02%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+179	+133	+98	0	-1	0
Re-Offered Yield	3.61%	2.55%	1.72%	0.03%	0.03%	0.02%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.65%**	**2.60%**	**1.79%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+164	+118	+83	0	-1	0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	190	140	105	0	0	2
EPCOR (A(L)/-/A-)	168	127	91	0	0	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.79%	1.18%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+179	+134
Re-Offered Yield	3.58%	2.52%
Commission (bp)	4.00	5.00
All-in Yield	**3.62%**	**2.57%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+164	+119

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	190	140
EPCOR (A(L)/-/A-)	168	127

Scotiabank
12-Sep-16

5-year
1-Sep-21
0.75%
0.72%
+98
1.70%
7.00
1.77%

5-year
+83

5-year
103
91

Indicative New Issue Spreads

Monday, September 19, 2016

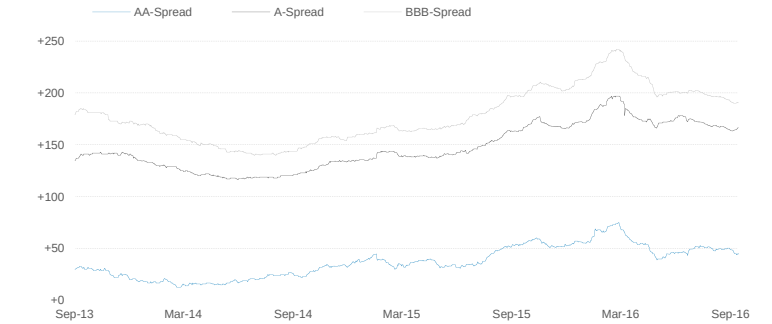
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.74%	0.02%	1.22%	0.04%	1.82%	0.03%
Indicative Spread	**+98**	0	**+133**	-1	**+179**	0
Indicative Re-offer Yield	1.72%	0.02%	2.55%	0.03%	3.61%	0.03%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.793%		2.598%		3.654%	
All-in Spread to GoC curve (bp)	+105		+138		+183	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
16-Sep	REAL-T	Various	$404M	Various	Various
15-Sep	Home Trust Company	AAA/AAA/Aaa	$296M	5 yr	+89
15-Sep	Canexus Corporation	-/-/-	$110M	7NC3	+695
13-Sep	Plenary Infrastructure Calgary LP	-/-/-	$57M	32 yr	+220
13-Sep	Mountain View Partners GP	A(L)/-/A3	$381M	35 yr	+215
13-Sep	Sun Life Financial Inc.	A(L)/A-/-	$1,000M	7+5 yr	+208
13-Sep	Industrial Alliance	A/A/-	$400M	7+5 yr	+235

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+98**	0	**+133**	-1	**+179**	0
Hydro One	A(H)/A3/A	+83	0	+118	-1	+164	0
Nova Scotia Power	A(L)/-/BBB+	+105	2	+140	0	+190	0
EPCOR	A(L)/-/A-	+91	0	+127	0	+168	0

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market saw continued activity last week, with $3.4 billion pricing across nine transactions. Brookfield Asset Management printed a highly successful $500 million 10.5 year transaction at GoC +253bps. Meanwhile in the insurance space, Sun Life Financial and Industrial Alliance each came to market with 7+5 year sub debt deals, raising a combined total of $1.4 billion. The high yield market saw Iron Mountain Canada and Canexus come to market, each with 7NC3 transactions that totaled $360 million. In secondary markets, Canadian corporate spreads finished a few bps wider, roughly in line with U.S. spreads, with IG26 closing ~3bps wider on the week. At week end, YTD new issue volume stood at $85 billion, 5% ahead of 2015's pace.

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Estimates for the week of September 19 – 23

CANADA

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
09/19		**Negative Rates Lecture with BOC's Gravelle & Queen's U Koeppl (12:00)**				
09/20		**Bank of Canada's Poloz Speech in Quebec City (12:30)**				
09/21	08:30	Wholesale Trade (m/m)	Jul	--	--	0.7
09/23	08:30	CPI, All items (m/m)	Aug	0.1	0.1	-0.2
09/23	08:30	CPI, All items (y/y)	Aug	1.3	1.3	1.3
09/23	08:30	Core X8 CPI (m/m)	Aug	0.2	0.2	0.0
09/23	08:30	Core X8 CPI (y/y)	Aug	2.0	2.0	2.1
09/23	08:30	CPI, All items (index)	Aug	--	--	128.9
09/23	08:30	CPI SA, All items (m/m)	Aug	--	--	0.0
09/23	08:30	Core CPI SA, All items (m/m)	Aug	--	--	0.1
09/23	08:30	Retail Sales (m/m)	Jul	0.2	0.2	-0.1
09/23	08:30	Retail Sales ex. Autos (m/m)	Jul	0.7	0.6	-0.8

UNITED STATES

Date	Time	Indicator/ Event	Period	BNS	Consensus	Latest
09/19	10:00	NAHB Housing Market Index	Sep	--	60.0	60.0
09/20	08:30	Building Permits (000s a.r.)	Aug	--	1170	1144
09/20	08:30	Housing Starts (000s a.r.)	Aug	1200	1192	1211
09/20	08:30	Housing Starts (m/m)	Aug	-0.9	-1.6	2.1
09/21	07:00	MBA Mortgage Applications (w/w)	SEP 16	--	--	4.2
09/21	14:00	**FOMC Interest Rate Meeting (%)**	**Sep 21**	**0.50**	**0.50**	**0.50**
09/21		**Federal Reserve Board Chairwoman Janet Yellen holds news conference (14:30)**				
09/22	08:30	Initial Jobless Claims (000s)	SEP 17	260	265	260
09/22	08:30	Continuing Claims (000s)	SEP 10	2145	2150	2143
09/22	10:00	Existing Home Sales (mn a.r.)	Aug	5.45	5.45	5.39
09/22	10:00	Existing Home Sales (m/m)	Aug	1.1	1.1	-3.2
09/22	10:00	Leading Indicators (m/m)	Aug	--	0.0	0.4
09/23		**Fed's Harker, Mester, Lockhart on Panel at Philly Fed Conference (12:00)**				
09/23		**Fed's Kaplan Speaks in Houston in Moderated Q&A (12:30)**				

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 09/12/2016
Date:	Monday, September 12, 2016 7:24:58 PM
Attachments:	OPG Weekly Indicative Spreads - Sep 12, 2016.xlsx estimates.pdf Ontario Power Generation-Sep-12-2016.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	12-Sep-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	1.79%	1.18%	0.72%	0.16%	0.12%	0.05%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+179	+134	+98	0	0	-1
Re-Offered Yield	3.58%	2.52%	1.70%	0.16%	0.12%	0.04%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.62%**	**2.57%**	**1.77%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+164	+119	+83	0	0	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	190	140	103	0	0	-2
EPCOR (A(L)/-/A-)	168	127	91	0	0	-1

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	1.63%	1.06%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+179	+134
Re-Offered Yield	3.42%	2.40%
Commission (bp)	4.00	5.00
All-in Yield	**3.46%**	**2.45%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+164	+119

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	190	140
EPCOR (A(L)/-/A-)	168	127

Scotiabank
5-Sep-16

	5-year
Trade Date	1-Sep-21
Coupon	0.75%
Yield	0.67%
Spread	+99
Interpolated Yield	1.66%
Term	7.00
Reoffer Price	**1.73%**

	5-year
Spread	+84

	5-year
Bid	105
Offer	92

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Estimates for the week of September 12 – 16

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
SEPT 12-14		**IMF's Lagarde and Suncor CEO speak in Toronto**				
09/13		**IMF's Lagarde Host the Annual Sylvia Ostry Lecture (9:00)**				
09/14		**Bank of Canada's Wilkins Lecture in London UK (6:15)**				
09/14	08:30	Teranet - National Bank HPI (y/y)	Aug	--	--	10.9
09/15	09:00	Existing Home Sales (m/m)	Aug	--	--	-1.3
09/16	08:30	International Securities Transactions (C$ bn)	Jul	--	--	9.0
09/16	08:30	Manufacturing Shipments (m/m)	Jul	1.0	--	0.8

UNITED STATES

Date	Time	Event	Period	BNS	Consensus	Latest
09/12		**Fed's Lockhart Speaks to Business Economists in Atlanta (8:05)**				
09/12		**Fed's Kashkari Speaks on Economy and TBTF (13:00)**				
09/12		**Fed's Brainard Speaks about Economic Outlook in Chicago (13:00)**				
09/13	14:00	Treasury Budget (US$ bn)	Aug	--	-98.0	-112.8
09/14	07:00	MBA Mortgage Applications (w/w)	SEP 9	--	--	0.9
09/14	08:30	Export Prices (m/m)	Aug	--	-0.1	0.1
09/14	08:30	Import Prices (m/m)	Aug	--	-0.1	0.1
09/15	08:30	Current Account (US$ bn)	2Q	--	-119.8	-124.7
09/15	08:30	Empire State Manufacturing Index	Sep	--	-1.0	-4.2
09/15	08:30	Initial Jobless Claims (000s)	SEP 10	260	--	259
09/15	08:30	Continuing Claims (000s)	SEP 3	--	--	2144
09/15	08:30	Philadelphia Fed Index	Sep	2.5	2.0	2.0
09/15	08:30	PPI (m/m)	Aug	--	0.1	-0.4
09/15	08:30	PPI ex. Food & Energy (m/m)	Aug	--	0.1	-0.3
09/15	08:30	Retail Sales (m/m)	Aug	-0.1	0.0	0.0
09/15	08:30	Retail Sales ex. Autos (m/m)	Aug	0.2	0.3	-0.3
09/15	09:15	Industrial Production (m/m)	Aug	-0.3	-0.2	0.7
09/15	09:15	Capacity Utilization (%)	Aug	--	75.7	75.9
09/15	10:00	Business Inventories (m/m)	Jul	--	0.1	0.2
09/16	08:30	CPI (m/m)	Aug	0.1	0.1	0.0
09/16	08:30	CPI (y/y)	Aug	0.9	1.0	0.8
09/16	08:30	CPI (index)	Aug	--	240.7	240.6
09/16	08:30	CPI ex. Food & Energy (m/m)	Aug	0.1	0.2	0.1
09/16	08:30	CPI ex. Food & Energy (y/y)	Aug	2.2	2.3	2.2
09/16	10:00	U. of Michigan Consumer Sentiment	Sep P	90.0	91.0	89.8
09/16	16:00	Total Net TIC Flows (US$ bn)	Jul	--	--	-202.8
09/16	16:00	Net Long-term TIC Flows (US$ bn)	Jul	--	--	-3.6

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Indicative New Issue Spreads

Monday, September 12, 2016

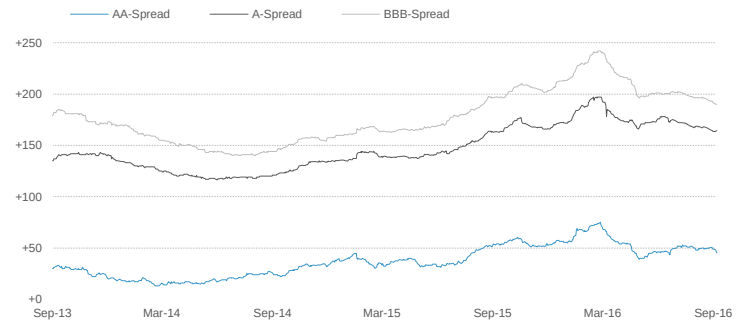
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75%		1.50%		3.50%	
	1-Sep-21		1-Jun-26		1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	0.72%	0.05%	1.18%	0.12%	1.79%	0.16%
Indicative Spread	**+98**	-1	**+134**	0	**+179**	0
Indicative Re-offer Yield	1.70%	0.04%	2.52%	0.12%	3.58%	0.16%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.766%		2.572%		3.617%	
All-in Spread to GoC curve (bp)	+105		+139		+183	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
8-Sep	Suncor Energy Inc.	A(L)/A-/Baa1	$300M	30 yr	+263
8-Sep	Suncor Energy Inc.	A(L)/A-/Baa1	$700M	10 yr	+190
8-Sep	Canadian Western Bank	A(L)/-/-	$250M	5 yr	+210
8-Sep	Merrill Lynch NHA MBS	-/-/-	$750M	5 yr	+88
8-Sep	Inter Pipeline Ltd.	BBB(H)/BBB+/-	$350M	7 yr	+177
7-Sep	FortisAlberta Inc.	A(L)/A-/-	$150M	30 yr	+172
7-Sep	Royal Bank of Canada	AA/AA-/Aa3	$1,750M	5 yr	+96

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+98**	-1	**+134**	0	**+179**	0
Hydro One	A(H)/A3/A	+83	-1	+119	0	+164	0
Nova Scotia Power	A(L)/-/BBB+	+103	-2	+140	0	+190	0
EPCOR	A(L)/-/A-	+91	-1	+127	0	+168	0

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Momentum returned to the Canadian corporate credit market this week, with $4.25bn pricing across 6 transactions. At week end, YTD new issue volume stood at $82bn, 9% ahead of 2015's pace. Three energy issuers accessed the market. Suncor Energy raised $1bn across two tranches. Inter Pipeline Ltd priced $350m 7 year notes. FortisAlberta Inc. priced $150m 30 year notes. The financial space also saw three new issues. Royal Bank of Canada issued a $1.75bn 5 year deposit note. Canadian Western Bank printed a $250m 5 year deposit note. Merrill Lynch Canada Inc. completed a $750m jumbo NHA MBS transaction. Canadian corporate spreads closed unchanged to slightly tighter on the week, outperforming CDX which was 4 bps wider.

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Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 03/6/2017
Date:	Monday, March 06, 2017 7:22:56 PM
Attachments:	OPG Weekly Indicative Spreads - March 6, 2017.xlsx Ontario Power Generation-Mar-6-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	6-Mar-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Mar-22			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.50%			
Benchmark Yield	2.41%	1.79%	1.17%	0.04%	0.06%	0.05%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+157	+112	+87	-2	-2	-1
Re-Offered Yield	3.98%	2.91%	2.04%	0.02%	0.04%	0.04%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**4.02%**	**2.96%**	**2.11%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+142	+97	+72	-2	-2	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	155	112	87	-2	-2	0
EPCOR (A(L)/-/A-)	142	99	74	-2	-2	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.37%	1.73%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+159	+114
Re-Offered Yield	3.96%	2.87%
Commission (bp)	4.00	5.00
All-in Yield	**4.00%**	**2.92%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+144	+99

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	157	114
EPCOR (A(L)/-/A-)	144	101

Scotiabank
27-Feb-17

5-year
1-Mar-22
0.50%
1.12%
+88
2.00%
7.00
2.07%

5-year
+73

5-year
87
74

Indicative New Issue Spreads

Monday, March 06, 2017

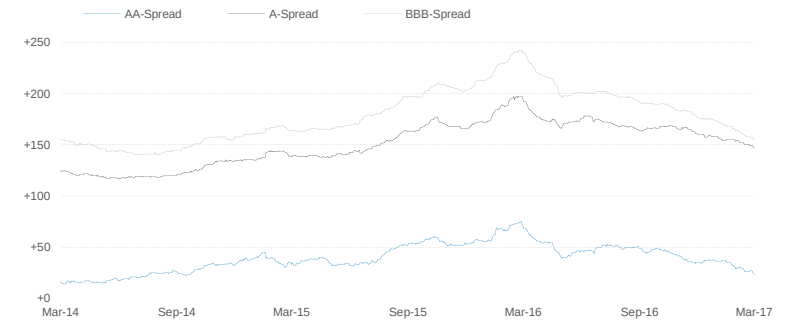
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.50% 1-Mar-22		1.50% 1-Jun-26		2.75% 1-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.17%	0.05%	1.79%	0.06%	2.41%	0.04%
Indicative Spread	**+87**	-1	**+112**	-2	**+157**	-2
Indicative Re-offer Yield	2.04%	0.04%	2.91%	0.04%	3.98%	0.02%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.105%		2.957%		4.018%	
All-in Spread to GoC curve (bp)	+94		+117		+161	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
1-Mar	TELUS Corporation	BBB(H)/BBB+/Baa1	$325M	31 Yr	+235
27-Feb	Plenary Health Phase 1C	-/-/-	$141M	33 Yr	n.a.
27-Feb	Crombie REIT	BBB(L)/-/-	$75M	4 Yr	+245

COMPARABLES	Ratings (DBRS/Moody's/S&P)	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+87**	-1	**+112**	-2	**+157**	-2
Hydro One	A(H)/A3/A	+72	-1	+97	-2	+142	-2
Nova Scotia Power	A(L)/-/BBB+	+87	0	+112	-2	+155	-2
EPCOR	A(L)/-/A-	+74	0	+99	-2	+142	-2

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Primary activity in the Canadian corporate credit market was moderate last week with $541 million pricing across three transactions. Crombie REIT kicked off the week, reopening its 3.962% 2021 notes for $75 million at +245. Following recent offerings by TMT peers, TELUS completed a cross-border offering, issuing C$325 million 31 year notes in the domestic market, and US$500 million 10 year notes in the U.S. In the project finance space, Plenary Health Phase 1C issued $141 million for a CAMH redevelopment project. Canadian banks exited blackout, posting strong earnings, which led to supply south of the border. BNS and RBC each tapped the U.S. market post-earnings, raising a combined US$ 4.1 billion. Global markets saw a surge in momentum following President Trump's address Tuesday evening, sending a strong bid into risk assets. Canadian corporate spreads tightened 2 bps over the week, underperforming U.S. spreads which were 3 bps better WoW. The market-implied probability of an FOMC rate hike at the March 15 meeting increased to ~92%. At week end, YTD new issue volumes totaled $16.9 billion, 5% ahead of 2016's pace.

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Estimates for the week of March 6 – 10

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
03/07	08:30	Merchandise Trade Balance (C$ bn)	Jan	0.75	--	0.92
03/08	08:15	Housing Starts (000s a.r.)	Feb	200.0	--	207.4
03/08	08:30	Building Permits (m/m)	Jan	--	--	-6.6
03/08	08:30	Productivity (q/q a.r.)	4Q	--	--	1.2
03/09	08:30	Capacity Utilization (%)	4Q	--	--	81.9
03/09	08:30	New Housing Price Index (m/m)	Jan	--	--	0.1
03/10	08:30	Employment (000s m/m)	Feb	0.0	--	48.3
03/10	08:30	Unemployment Rate (%)	Feb	6.8	--	6.8

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
MAR 05-07		33rd Annual NABE Economic Policy Conference				
03/06	10:00	Durable Goods Orders (m/m)	Jan F	--	--	1.8
03/06	10:00	Durable Goods Orders ex. Trans. (m/m)	Jan F	--	--	-0.2
03/06	10:00	Factory Orders (m/m)	Jan	1.0	0.9	1.3
03/06	15:00	Kashkari speaks at NABE conference				
03/07	08:30	Trade Balance (US$ bn)	Jan	-46.0	-47.0	-44.3
03/07	10:00	Rosenstein/ Brand Nominations - Hearing				
03/07	15:00	Consumer Credit (US$ bn m/m)	Jan	--	20.0	14.2
03/08	07:00	MBA Mortgage Applications (w/w)	MAR 3	--	--	5.8
03/08	08:15	ADP Employment Report (000s m/m)	Feb	200.0	180.0	246.4
03/08	08:30	Productivity (q/q a.r.)	4Q F	--	1.5	1.3
03/08	08:30	Unit Labor Costs (q/q a.r.)	4Q F	--	1.5	1.7
03/08	09:30	Duke Nomination - Hearing				
03/08	14:30	Administration's Indian Affairs Priorities - Hearing				
03/08	14:30	Global Nuclear Weapons Environment - Hearing				
03/09	08:30	Export Prices (m/m)	Feb	--	0.1	0.4
03/09	08:30	Import Prices (m/m)	Feb	--	0.1	0.4
03/09	08:30	Initial Jobless Claims (000s)	MAR 4	230	245	223
03/09	08:30	Continuing Claims (000s)	FEB 25	2065	2060	2066
03/09	09:30	Defense Subcommittee hearing on "Member's Day."				
03/09	10:00	Veterans Service Organizations - Hearing				
03/10	08:30	Nonfarm Employment Report (000s m/m)	Feb	200	175	227
03/10	08:30	Unemployment Rate (%)	Feb	4.7	4.7	4.8
03/10	08:30	Household Employment Report (000s m/m)	Feb	--	--	-30.0
03/10	08:30	Average Hourly Earnings (m/m)	Feb	0.2	0.2	0.1
03/10	08:30	Average Hourly Earnings (y/y)	Feb	2.6	2.8	2.5
03/10	08:30	Average Weekly Hours	Feb	--	34.4	34.4
03/10	14:00	Treasury Budget (US$ bn)	Feb	--	--	51.3

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Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 02/27/2017
Date:	Monday, February 27, 2017 4:24:19 PM
Attachments:	OPG Weekly Indicative Spreads - February 27, 2017.xlsx Ontario Power Generation-Feb-27-2017.pdf estimates.pdf

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Good Afternoon,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	27-Feb-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Mar-22			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.50%			
Benchmark Yield	2.37%	1.73%	1.12%	-0.08%	-0.11%	-0.08%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+159	+114	+88	1	1	1
Re-Offered Yield	3.96%	2.87%	2.00%	-0.07%	-0.10%	-0.07%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**4.00%**	**2.92%**	**2.07%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+144	+99	+73	1	1	1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	157	114	87	1	1	1
EPCOR (A(L)/-/A-)	144	101	74	1	1	1

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.45%	1.84%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+158	+113
Re-Offered Yield	4.03%	2.97%
Commission (bp)	4.00	5.00
All-in Yield	**4.07%**	**3.02%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+143	+98

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	156	113
EPCOR (A(L)/-/A-)	143	100

Scotiabank
21-Feb-17

5-year
1-Mar-22
0.50%
1.20%
+87
2.07%
7.00
2.14%

5-year
+72

5-year
86
73

Indicative New Issue Spreads

Monday, February 27, 2017

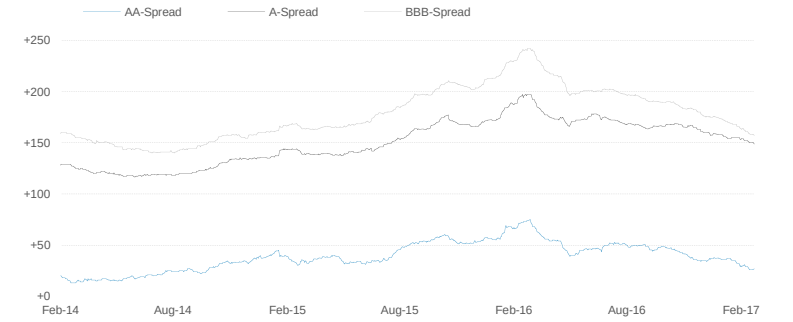
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.50%		1.50%		2.75%	
	1-Mar-22		1-Jun-26		1-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.12%	-0.08%	1.73%	-0.11%	2.37%	-0.08%
Indicative Spread	**+88**	1	**+114**	1	**+159**	1
Indicative Re-offer Yield	2.00%	-0.07%	2.87%	-0.10%	3.96%	-0.07%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.069%		2.920%		3.995%	
All-in Spread to GoC curve (bp)	+95		+119		+163	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
24-Feb	Crew Energy Inc.	B/B/-	$300M	7NC3	+520
22-Feb	CNH Capital Receivables ABS	Various	$408M	Various	Various
22-Feb	Bell Canada	BBB(H)/BBB+/Baa1	$1,500M	7 Yr / 30 Yr	+125 / +205
22-Feb	Superior Plus LP	BB(L)/BB/-	$250M	7NC3	+387
21-Feb	Toyota Credit Canada Inc.	-/AA-/Aa3	$600M	5 Yr	+86
21-Feb	Metro Inc.	BBB/BBB/-	$400M	3 Yr	+57

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+88**	1	**+114**	1	**+159**	1
Hydro One	A(H)/A3/A	+73	1	+99	1	+144	1
Nova Scotia Power	A(L)/-/BBB+	+87	1	+114	1	+157	1
EPCOR	A(L)/-/A-	+74	1	+101	1	+144	1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market saw an influx of supply last week as six transactions priced for a combined $3.5 billion. Bell Canada issued $1.5 billion across 7 and 30 year tranches in the largest corporate transaction of 2017 thus far. Toyota Credit Canada and Metro also tapped the market for a combined $1 billion. The high yield market's first activity of the year had Superior Plus and Crew Energy price 7NC3 transactions for a combined $550 million. Market tone remained stable over the week, with FOMC minutes having minimal impact. Similarly, the Bank of Canada meeting this week is expected to be a non-event, with markets pricing in virtually a 100% probability of the Bank holding rates unchanged. Domestic banks are set to continue reporting Q1 results this week, with BNS and BMO reporting Tuesday, followed by NBF on Wednesday and TD on Thursday. Canadian corporate spreads closed relatively unchanged on the week, while in the U.S., IG27 finished 1bp tighter. At week end, YTD new issue volumes totaled $16.3 billion, 33% ahead of last year's pace.

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Estimates for the week of February 27 – March 3

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/28	08:30	IPPI (m/m)	Jan	--	--	0.4
02/28	08:30	Raw Materials Price Index (m/m)	Jan	--	--	6.5
03/01	08:30	Current Account (C$ bn a.r.)	4Q	--	--	-18.3
03/01	10:00	**BoC Interest Rate Announcement (%)**	**Mar 1**	**0.50**	**0.50**	**0.50**
03/02	08:30	Real GDP (m/m)	Dec	0.3	--	0.4
03/02	08:30	Real GDP (q/q a.r.)	4Q	2.1	--	3.5

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/27	08:30	Durable Goods Orders (m/m)	Jan P	1.5	2.0	-0.5
02/27	08:30	Durable Goods Orders ex. Trans. (m/m)	Jan P	0.5	0.5	0.5
02/27	10:00	Pending Home Sales (m/m)	Jan	--	0.9	1.6
02/27	10:30	Dallas Fed. Manufacturing Activity	Feb	--	20.0	22.1
02/27	11:00	Fed's Kaplan Speaks in Oklahoma				
02/28	08:30	GDP (q/q a.r.)	4Q S	2.0	2.1	1.9
02/28	08:30	GDP Deflator (q/q a.r.)	4Q S	--	2.1	2.1
02/28	08:30	Wholesale Inventories (m/m)	Jan P	--	0.4	1.0
02/28	09:00	S&P/Case-Shiller Home Price Index (m/m)	Dec	--	0.7	0.9
02/28	09:00	S&P/Case-Shiller Home Price Index (y/y)	Dec	--	--	5.3
02/28	09:45	Chicago PMI	Feb	52.0	53.0	50.3
02/28	10:00	Consumer Confidence Index	Feb	110	111.0	111.8
02/28	10:00	Richmond Fed Manufacturing Index	Feb	--	10.0	12.0
02/28	15:30	Fed's Williams Speaks in Santa Cruz				
02/28	18:50	Fed's Bullard Speaks in Washington				
03/01	07:00	MBA Mortgage Applications (w/w)	FEB 24	--	--	-2.0
03/01	08:30	PCE Deflator (m/m)	Jan	0.4	0.5	0.2
03/01	08:30	PCE Deflator (y/y)	Jan	1.9	2.0	1.6
03/01	08:30	PCE ex. Food & Energy (m/m)	Jan	0.2	0.3	0.1
03/01	08:30	PCE ex. Food & Energy (y/y)	Jan	1.8	1.8	1.7
03/01	08:30	Personal Spending (m/m)	Jan	0.3	0.3	0.5
03/01	08:30	Personal Income (m/m)	Jan	0.2	0.3	0.3
03/01	10:00	Construction Spending (m/m)	Jan	0.5	0.7	-0.2
03/01	10:00	ISM Manufacturing Index	Feb	56.0	55.8	56.0
03/01		Domestic Vehicle Sales (mn a.r.)	Feb	--	--	13.6
03/01		Total Vehicle Sales (mn a.r.)	Feb	17.5	17.6	17.5
03/01	13:00	Fed's Kaplan Speaks in Dallas				
03/01	14:00	U.S. Federal Reserve Releases Beige Book				
03/01	18:00	Fed's Brainard Speaks at Harvard				
03/02	08:30	Initial Jobless Claims (000s)	FEB 25	240	240	244
03/02	08:30	Continuing Claims (000s)	FEB 18	2050	2068	2060
03/02	19:00	Fed's Mester Speaks on Leadership in New York				
03/03	10:00	ISM Non-Manufacturing Composite	Feb	56.0	56.5	56.5
03/03	10:15	Fed's Evans and Lacker Speak on Panel in New York				
03/03	12:15	Fed's Powell Speaks on Innovation and the Payments System				
03/03	13:00	Fed Vice Chair Fischer Speaks in New York				
03/03	13:00	Yellen Gives Economic Outlook Speech in Chicago				

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Date:	Tuesday, February 21, 2017 6:30:39 PM
Attachments:	OPG Weekly Indicative Spreads - February 21, 2017.xlsx Ontario Power Generation-Feb-21-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

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Bank Name	Scotiabank
Date	21-Feb-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Mar-22			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.50%			
Benchmark Yield	2.45%	1.84%	1.20%	0.06%	0.05%	0.02%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+158	+113	+87	-2	0	2
Re-Offered Yield	4.03%	2.97%	2.07%	0.04%	0.05%	0.04%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**4.07%**	**3.02%**	**2.14%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+143	+98	+72	-2	0	2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	156	113	86	-4	0	3
EPCOR (A(L)/-/A-)	143	100	73	-3	-1	0

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
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Re-Offered Yield	3.99%	2.92%
Commission (bp)	4.00	5.00
All-in Yield	**4.03%**	**2.97%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+145	+98

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	160	113
EPCOR (A(L)/-/A-)	146	101

Scotiabank
14-Feb-17

	5-year
Issue Date	1-Sep-21
Coupon	0.75%
Yield	1.18%
Spread	+85
Swap Rate	2.03%
Term	7.00
Issue Price	**2.10%**

	5-year
Spread	+70

	5-year
Bid	83
Ask	73

Indicative New Issue Spreads

February-21-17

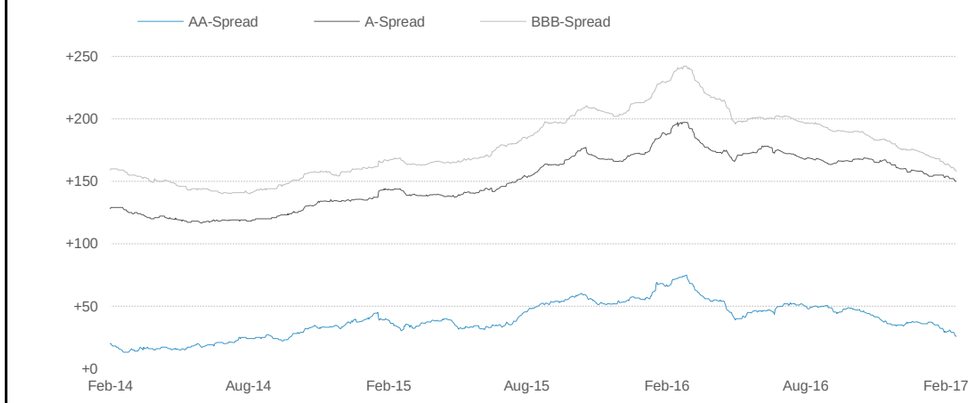
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.50% 1-Mar-22		1.50% 1-Jun-26		2.75% 01-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.20%	0.02%	1.84%	0.05%	2.45%	0.06%
Indicative Spread	**+87**	2	**+113**	0	**+158**	-2
Indicative Re-offer Yield	2.07%	0.04%	2.97%	0.05%	4.03%	0.04%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.137%		3.018%		4.070%	
All-in Spread to GoC curve (bp)	+94		+118		+162	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
16-Feb	Brookfield Infrastructure	-/BBB+/-	$300M	7 Yr	+180
15-Feb	Ford Credit Canada	BBB/BBB/Baa2	$750M	5 Yr	+148
15-Feb	Enercare Solutions Inc.	BBB/BBB/-	$275M	5 Yr	+215
15-Feb	Enercare Solutions Inc.	BBB/BBB/-	$225M	7 Yr	+245
14-Feb	Shaw Communications	BBB(L)/BBB-/Baa3	$300M	10 Yr	+193

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+87**	2	**+113**	0	**+158**	-2
Hydro One	A(H)/A3/A	+72	2	+98	0	+143	-2
Nova Scotia Power	A(L)/-/BBB+	+86	3	+113	0	+156	-4
EPCOR	A(L)/-/A-	+73	0	+100	-1	+143	-3

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Activity in the Canadian corporate credit market picked up last week, with four transactions pricing for a combined $1.85 billion. Shaw Communications started off the week by issuing $300 million of 10 year notes, representing the first issuance in the TMT space in 2017. Ford Credit Canada priced $750 million in 5 year notes at CRV +148. Enercare Solutions issued $500 million across two tranches (5 and 7 year). Brookfield Infrastructure Finance ULC finished off the week with a 7 year $300 million MTN . All transactions witnessed strong investor demand, evidence by large order books, low single digit fill percentages, and zero to negative new issue concessions. Global market tone remained robust. Both the S&P 500 and the TSX ended the week slightly higher. Canadian corporate spreads finished the week 2 bps better, outperforming the U.S. , where the IG27 was out by 1bp. At week end, YTD new issue volumes totaled $12.9 billion, 44% ahead of 2016's pace.

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Estimates for the week of February 20 – 24

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/20	08:30	Wholesale Trade (m/m)	Dec	--	--	0.2
02/21	07:30	Freeland and Mulroney speak in Toronto				
02/22	08:30	Retail Sales (m/m)	Dec	0.0	0.3	0.2
02/22	08:30	Retail Sales ex. Autos (m/m)	Dec	0.5	0.9	0.1
02/24	08:30	CPI, All items (m/m)	Jan	0.3	0.3	-0.2
02/24	08:30	CPI, All items (y/y)	Jan	1.6	1.6	1.5
02/24	08:30	CPI, All items (index)	Jan	--	--	128.4
02/24	08:30	Core X8 CPI (m/m)	Jan	--	--	-0.3
02/24	08:30	Core X8 CPI (y/y)	Jan	--	--	1.6

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/21	08:50	Fed's Kashkari Speaks on Economy in Golden Valley, MN				
02/21	12:00	Fed's Harker to Speak on Economic Outlook				
02/21	15:30	Fed's Williams Speaks to Students in Boise, Idaho				
02/22	07:00	MBA Mortgage Applications (w/w)	FEB 17	--	--	-3.7
02/22	10:00	Existing Home Sales (mn a.r.)	Jan	5.5	5.6	5.5
02/22	10:00	Existing Home Sales (m/m)	Jan	0.2	1.1	-2.8
02/22	14:00	FOMC Meeting Minutes				
02/23	08:30	Initial Jobless Claims (000s)	FEB 18	240	--	239
02/23	08:30	Continuing Claims (000s)	FEB 11	2070	--	2076
02/23	08:35	Fed's Lockhart to Speak on His 10-Year Tenure at the Fed				
02/24	10:00	New Home Sales (000s a.r.)	Jan	560.0	573.0	536.0
02/24	10:00	U. of Michigan Consumer Sentiment	Feb F	--	96.0	95.7

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Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 02/13/2017
Date:	Monday, February 13, 2017 5:45:27 PM
Attachments:	OPG Weekly Indicative Spreads - February 13, 2017.xlsx Ontario Power Generation-Feb-13-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	13-Feb-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.75%			
Benchmark Yield	2.39%	1.79%	1.18%	0.00%	0.00%	0.02%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+160	+113	+85	0	2	-1
Re-Offered Yield	3.99%	2.92%	2.03%	0.00%	0.02%	0.01%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**4.03%**	**2.97%**	**2.10%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+145	+98	+70	0	2	-1

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	160	113	83	-1	-2	-7
EPCOR (A(L)/-/A-)	146	101	73	-1	0	-3

Bank Name
Date

Indicative OPG New Issue Spreads	Current	
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.39%	1.79%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+160	+111
Re-Offered Yield	3.99%	2.90%
Commission (bp)	4.00	5.00
All-in Yield	**4.03%**	**2.95%**

Primary Comparable (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+145	+96

Other Comparables (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	161	115
EPCOR (A(L)/-/A-)	147	101

Scotiabank
6-Feb-17

	5-year
	1-Sep-21
	0.75%
	1.16%
	+86
	2.02%
	7.00
	2.09%

	5-year
	+71

	5-year
	90
	76

Indicative New Issue Spreads

February-13-17

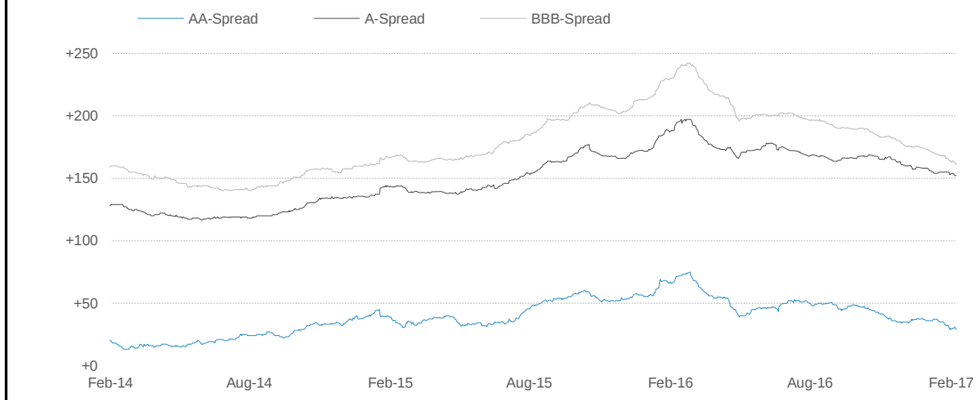
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		2.75% 01-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.18%	0.02%	1.79%	0.00%	2.39%	0.00%
Indicative Spread	**+85**	-1	**+113**	2	**+160**	0
Indicative Re-offer Yield	2.03%	0.01%	2.92%	0.02%	3.99%	0.00%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.100%		2.970%		4.029%	
All-in Spread to GoC curve (bp)	+92		+118		+164	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
9-Feb	Bruce Power L.P.	BBB/BBB/Baa2	$350M	7.4 Yr	+155
9-Feb	Bruce Power L.P.	BBB/BBB/Baa2	$400M	12.4 Yr	+205
7-Feb	BMW Canada Auto Trust	AAA/-/Aaa	$225M	2.4 Yr	+63
7-Feb	BMW Canada Auto Trust	AAA/-/Aaa	$175M	3.3 Yr	+91
7-Feb	BMW Canada Auto Trust	AAA/-/Aaa	$100M	4.8 Yr	+107

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+85**	-1	**+113**	2	**+160**	0
Hydro One	A(H)/A3/A	+70	-1	+98	2	+145	0
Nova Scotia Power	A(L)/-/BBB+	+83	-7	+113	-2	+160	-1
EPCOR	A(L)/-/A-	+73	-3	+101	0	+146	-1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Activity in the Canadian corporate credit market was subdued last week, with two transactions pricing for a combined $1.25 billion. Bruce Power came to market with $750 million across 7 and 12 year tranches of Senior Unsecured Notes. BMW printed $500 million in ABS notes over three tranches. Both transactions were well-received and highlighted that investors remain receptive to new supply. Global market tone remained stable, while Canada outperformed. Canadian jobs data released Friday showed the economy added 48.3k jobs in January, well exceeding expectations. Canadian corporate spreads finished the week 2 bps better as the TSX closed up ~ 1.5% WoW. U.S. markets traded sideways despite political headlines, with the S&P500 finishing unchanged and IG27 out 1 bp. Secondary markets in Canada saw active flows, with client activity skewed towards better buying. At week end, YTD new issue volumes totaled $11 billion, 39% ahead of 2016's pace.

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Estimates for the week of February 13 – 17

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/14	08:30	Teranet - National Bank HPI (y/y)	Jan	--	--	12.3
02/15	08:30	Manufacturing Shipments (m/m)	Dec	-0.5	--	1.5
02/15	09:00	Existing Home Sales (m/m)	Jan	--	--	2.2
02/17	08:30	International Securities Transactions (C$ bn)	Dec	--	--	7.2

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
02/11	07:30	Fed's Fischer to Address Economics Conference in U.K.				
02/14	08:30	PPI (m/m)	Jan	--	0.3	0.3
02/14	08:30	PPI ex. Food & Energy (m/m)	Jan	--	0.2	0.2
02/14	08:50	Fed's Lacker to Speak at University of Delaware				
02/14	10:00	Fed's Yellen Appears Before Senate Banking Panel				
02/14	13:00	Dallas Fed's Kaplan Speaks in Houston				
02/14	13:15	Fed's Lockhart to Speak on Economy in Huntsville, Alabama				
02/15	07:00	MBA Mortgage Applications (w/w)	FEB 10	--	--	2.3
02/15	08:30	CPI (m/m)	Jan	0.3	0.3	0.3
02/15	08:30	CPI (y/y)	Jan	2.4	2.4	2.1
02/15	08:30	CPI (index)	Jan	--	--	241.4
02/15	08:30	CPI ex. Food & Energy (m/m)	Jan	0.2	0.2	0.2
02/15	08:30	CPI ex. Food & Energy (y/y)	Jan	2.2	2.2	2.2
02/15	08:30	Empire State Manufacturing Index	Feb	--	6.5	6.5
02/15	08:30	Retail Sales (m/m)	Jan	0.0	0.1	0.6
02/15	08:30	Retail Sales ex. Autos (m/m)	Jan	0.2	0.4	0.2
02/15	09:15	Capacity Utilization (%)	Jan	--	75.5	75.5
02/15	09:15	Industrial Production (m/m)	Jan	-0.1	0.0	0.8
02/15	10:00	Business Inventories (m/m)	Dec	--	0.4	0.7
02/15	10:00	NAHB Housing Market Index	Feb	--	67.0	67.0
02/15	10:00	Fed Chair Yellen Delivers Semi-Annual Testimony to House Panel				
02/15	12:00	Fed's Rosengren to Address NY Assoc for Business Economics				
02/15	12:45	Fed's Harker Speaks in Philadelphia				
02/15	16:00	Total Net TIC Flows (US$ bn)	Dec	--	--	23.7
02/15	16:00	Net Long-term TIC Flows (US$ bn)	Dec	--	--	30.8
02/16	08:30	Building Permits (000s a.r.)	Jan	--	1230	1228
02/16	08:30	Housing Starts (000s a.r.)	Jan	1200	1228	1226
02/16	08:30	Housing Starts (m/m)	Jan	-2.1	0.2	11.3
02/16	08:30	Initial Jobless Claims (000s)	FEB 11	240	249	234
02/16	08:30	Continuing Claims (000s)	FEB 4	2065	2058	2078
02/16	08:30	Philadelphia Fed Index	Feb	18.0	15.0	23.6
02/17	10:00	Leading Indicators (m/m)	Jan	--	0.4	0.5
02/17		United States Sovereign Debt to be rated by Moody's				

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Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 01/16/2017
Date:	Monday, January 16, 2017 5:15:01 PM
Attachments:	Ontario Power Generation-Jan-16-2017.pdf estimates.pdf OPG Weekly Indicative Spreads - January 16, 2017.xlsx

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Good Afternoon,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Indicative New Issue Spreads

January-16-17

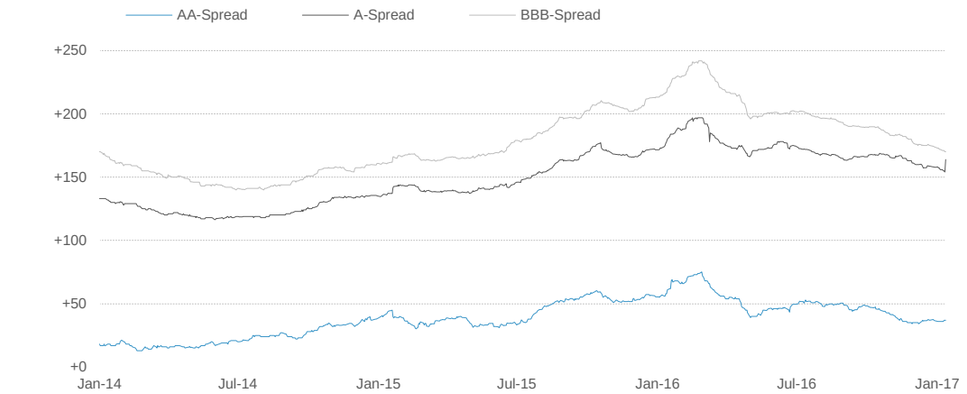
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		2.75% 01-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.19%	0.04%	1.75%	0.03%	2.30%	0.03%
Indicative Spread	**+85**	-2	**+115**	-2	**+158**	-2
Indicative Re-offer Yield	2.04%	0.02%	2.90%	0.01%	3.88%	0.01%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.109%		2.955%		3.917%	
All-in Spread to GoC curve (bp)	+92		+120		+162	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
12-Jan	CIBC	AA/A+/Aa3	$300M	2 yr	+32
12-Jan	CCDJ	AA/A+/Aa2	$1,000M	5 yr	+95
11-Jan	Algonquin Power Co.	BBB(L)/BBB/-	$300M	10 yr	+237
11-Jan	Bank of Nova Scotia	AA/A+/Aa3	$500M	10 yr	+107
11-Jan	RioCan REIT	BBB(H)/BBB/-	$300M	6 yr	+155
10-Jan	Merrill Lynch Canada NHA MBS	AAA/AAA/Aaa	$1,111M	5 yr	+73
10-Jan	Honda Canada Finance Inc.	A(H)/-/A1	$600M	6 yr / 3 yr	+102 / +52

COMPARABLES	Ratings DBRS/Moody's/S&P	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+85**	-2	**+115**	-2	**+158**	-2
Hydro One	A(H)/A3/A	+70	-2	+100	-2	+143	-2
Nova Scotia Power	A(L)/-/BBB+	+92	-3	+122	-3	+162	-3
EPCOR	A(L)/-/A-	+74	-1	+104	-1	+147	-1

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market saw the return of primary activity following the holidays, with $4.1 billion pricing across 7 transactions last week. BNS re-opened its December 2026 notes for an additional $500 million, while CIBC issued a $300 million FRN. The financial sector also saw CCDJ print $1 billion 5 year notes while BAML came to market with a $1.1 billion NHA MBS transaction. Non-financial issuance came from RioCan REIT and Algonquin Power, who each raised $300 million. Global market tone remained solid, with equity indices in Canada and the U.S. unchanged on the week. The Canadian dollar continued to strengthen, with USDCAD finishing the week at ~1.31. Canadian spreads finished the week marginally tighter, outperforming the U.S. where IG2 was 1 bp wider. At week end, YTD new issue volumes totaled $4.1 billion.

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Estimates for the week of January 16 – 20

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
01/18	10:00	**BoC Interest Rate Announcement (%)**	**Jan 18**	**0.50**	**0.50**	**0.50**
01/18		Bank of Canada Releases January Monetary Policy Report (10:00)				
01/18		BOC's Poloz and Wilkins Hold Press Conference in Ottawa (11:15)				
01/19	08:30	International Securities Transactions (C$ bn)	Nov	--	--	15.8
01/19	08:30	Manufacturing Shipments (m/m)	Nov	1.0	--	-0.8
01/20	08:30	CPI, All items (m/m)	Dec	0.2	--	-0.4
01/20	08:30	CPI, All items (y/y)	Dec	1.9	--	1.2
01/20	08:30	CPI, All items (index)	Dec	--	--	128.6
01/20	08:30	Retail Sales (m/m)	Nov	0.5	--	1.1
01/20	08:30	Retail Sales ex. Autos (m/m)	Nov	0.7	--	1.4

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
01/17	08:30	Empire State Manufacturing Index	Jan	--	8.0	9.0
01/17		Fed's Dudley Speaks on Consumer Behavior in New York (8:45)				
01/17		Fed's Williams Speaks in Sacramento (18:00)				
01/18	07:00	MBA Mortgage Applications (w/w)	JAN 13	--	--	5.8
01/18	08:30	CPI (m/m)	Dec	0.3	0.3	0.2
01/18	08:30	CPI (y/y)	Dec	2.1	2.1	1.7
01/18	08:30	CPI (index)	Dec	--	241.5	241.4
01/18	08:30	CPI ex. Food & Energy (m/m)	Dec	0.2	0.2	0.2
01/18	08:30	CPI ex. Food & Energy (y/y)	Dec	2.1	2.1	2.1
01/18	09:15	Capacity Utilization (%)	Dec	75.3	75.5	75.0
01/18	09:15	Industrial Production (m/m)	Dec	0.5	0.6	-0.4
01/18	10:00	NAHB Housing Market Index	Jan	--	69.0	70.0
01/18		Fed's Kashkari Speaks on Economy in Minneapolis (11:00)				
01/18		Fed's Yellen Speaks in San Francisco (15:00)				
01/18	16:00	Total Net TIC Flows (US$ bn)	Nov	--	--	18.8
01/18	16:00	Net Long-term TIC Flows (US$ bn)	Nov	--	--	9.4
01/19	08:30	Building Permits (000s a.r.)	Dec	1230	1220	1212
01/19	08:30	Housing Starts (000s a.r.)	Dec	1220	1200	1090
01/19	08:30	Housing Starts (m/m)	Dec	11.9	10.1	-18.7
01/19	08:30	Initial Jobless Claims (000s)	JAN 14	260	252	247
01/19	08:30	Continuing Claims (000s)	JAN 7	2090	--	2087
01/19	08:30	Philadelphia Fed Index	Jan	17.0	15.1	19.7
01/19		Fed's Yellen Speaks at Stanford (20:00)				
01/20		Fed's Harker Speaks in New Jersey on Economic Outlook (9:00)				
01/20		Fed's Williams Speaks at Event at San Francisco Fed (13:00)				

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Bank Name	Scotiabank
Date	16-Jan-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.75%			
Benchmark Yield	2.30%	1.75%	1.19%	0.03%	0.03%	0.04%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+158	+115	+85	-2	-2	-2
Re-Offered Yield	3.88%	2.90%	2.04%	0.01%	0.01%	0.02%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.92%**	**2.95%**	**2.11%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+143	+100	+70	-2	-2	-2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	162	122	92	-3	-3	-3
EPCOR (A(L)/-/A-)	147	104	74	-1	-1	-1

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.27%	1.72%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+160	+117
Re-Offered Yield	3.87%	2.89%
Commission (bp)	4.00	5.00
All-in Yield	**3.91%**	**2.94%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+145	+102

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	165	125
EPCOR (A(L)/-/A-)	148	105

Scotiabank
9-Jan-17

	5-year
Issue Date	1-Sep-21
Coupon	0.75%
Yield	1.15%
Spread	+87
Interpolated Yield	2.02%
Term	7.00
Reoffer Price	**2.09%**

	5-year
Spread	+72

	5-year
Bid	95
Offer	75

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 01/09/2017
Date:	Monday, January 09, 2017 6:59:01 PM
Attachments:	OPG Weekly Indicative Spreads - January 9, 2017.xlsx Ontario Power Generation-Jan-9-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

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Bank Name	Scotiabank
Date	9-Jan-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	2.75%	1.50%	0.75%			
Benchmark Yield	2.27%	1.72%	1.15%	-0.06%	-0.07%	-0.06%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+160	+117	+87	-7	-5	-5
Re-Offered Yield	3.87%	2.89%	2.02%	-0.13%	-0.12%	-0.11%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.91%**	**2.94%**	**2.09%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+145	+102	+72	-7	-5	-5

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	165	125	95	-10	-5	-5
EPCOR (A(L)/-/A-)	148	105	75	-7	-5	-5

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-26
Benchmark Canada Bond Coupon	2.75%	1.50%
Benchmark Yield	2.33%	1.79%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+167	+122
Re-Offered Yield	4.00%	3.01%
Commission (bp)	4.00	5.00
All-in Yield	**4.04%**	**3.06%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+152	+107

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	175	130
EPCOR (A(L)/-/A-)	155	110

Scotiabank
3-Jan-17

	5-year
1-Sep-21	
0.75%	
1.21%	
+92	
2.13%	
7.00	
2.20%	

	5-year
+77	

	5-year
100	
80	

Indicative New Issue Spreads

January-09-17

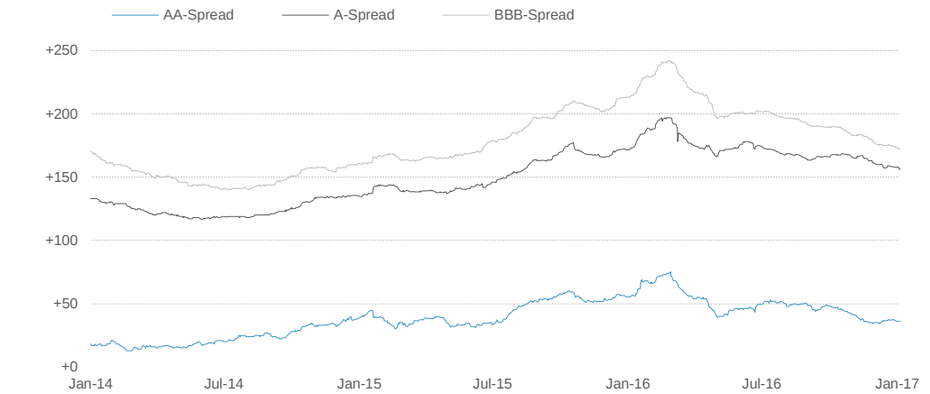
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		2.75% 01-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.15%	-0.06%	1.72%	-0.07%	2.27%	-0.06%
Indicative Spread	**+87**	-5	**+117**	-5	**+160**	-7
Indicative Re-offer Yield	2.02%	-0.11%	2.89%	-0.12%	3.87%	-0.13%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.089%		2.941%		3.906%	
All-in Spread to GoC curve (bp)	+94		+122		+164	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
No recent new issues					

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+87**	-5	**+117**	-5	**+160**	-7
Hydro One	A(H)/A3/A	+72	-5	+102	-5	+145	-7
Nova Scotia Power	A(L)/-/BBB+	+95	-5	+125	-5	+165	-10
EPCOR	A(L)/-/A-	+75	-5	+105	-5	+148	-7

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Unlike the U.S. market, corporate supply in Canada was muted last week with no new issues as the school break continued. However, with the holidays over and kids back in school, new issue activity could very well return to the market this week. Employment data drove rates markets in both Canada and the U.S. Friday, with a large upward revision in U.S. nonfarm payrolls leading to a sell-off in U.S. Treasuries (+9bps). Meanwhile, Canada saw impressive job growth of 53.7k in December, driving GoC yields 9bps higher on the day. In general, corporate spreads closed generally unchanged, with non-financial names outperforming.

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Estimates for the week of January 9 – 13

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
01/09	10:30	BoC Senior Loan Officer Survey	4Q	--	--	3.3
01/09	10:30	Business Outlook Future Sales	4Q	--	--	12.0
01/10	08:30	Building Permits (m/m)	Nov	--	--	8.7
01/12	08:30	New Housing Price Index (m/m)	Nov	--	--	0.4
01/12	08:30	Teranet - National Bank HPI (y/y)	Dec	--	--	11.9
01/13	09:00	Existing Home Sales (m/m)	Dec	--	--	-5.3

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
01/07		Fed's Kashkari Speaks on Too Big to Fail in Chicago (11:15)				
01/07		Fed's Powell Speaks in Chicago (11:15)				
01/09		Fed's Roesengren Speaks in Hartford, Connecticut (09:00)				
01/09		Fed's Lockhart Speaks to the Rotary Club of Atlanta (12:45)				
01/09	15:00	Consumer Credit (US$ bn m/m)	Nov	--	18.2	16.0
01/10	10:00	JOLTS Job Openings (000s)	Nov	--	--	5534
01/10	10:00	Wholesale Inventories (m/m)	Nov F	--	0.9	0.9
01/11	07:00	MBA Mortgage Applications (w/w)	JAN 6	--	--	0.1
01/12	08:30	Export Prices (m/m)	Dec	--	0.8	-0.3
01/12	08:30	Import Prices (m/m)	Dec	--	0.8	-0.3
01/12	08:30	Initial Jobless Claims (000s)	JAN 7	260	--	235
01/12	08:30	Continuing Claims (000s)	DEC 31	2120	--	2112
01/12		Fed's Harker Speaks in Malvern, Pennsylvania (8:30)				
01/12		Fed's Evans and Lockhart Take Part in Panel in Naples, Florida (8:30)				
01/12		Fed's Lockhart Speaks to Naples, Florida Chamber of Commerce (12:30)				
01/12		Fed's Bullard Speaks in New York on U.S. Outlook (13:15)				
01/12		Yellen to Addrerss Town Hall with Educators (19:00)				
01/13	08:30	PPI (m/m)	Dec	--	0.3	0.4
01/13	08:30	PPI ex. Food & Energy (m/m)	Dec	--	0.1	0.4
01/13	08:30	Retail Sales (m/m)	Dec	0.6	0.5	0.1
01/13	08:30	Retail Sales ex. Autos (m/m)	Dec	0.4	0.5	0.2
01/13		Fed's Harker Speaks on Economic Mobility in Philadelphia (9:30)				
01/13	10:00	Business Inventories (m/m)	Nov	--	0.3	-0.2
01/13	10:00	U. of Michigan Consumer Sentiment	Jan P	99.5	98.6	98.2
01/13	14:00	Treasury Budget (US$ bn)	Dec	--	-21.0	-136.7

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 12/5/2016
Date:	Monday, December 05, 2016 6:25:00 PM
Attachments:	OPG Weekly Indicative Spreads - December 5, 2016.xlsx Ontario Power Generation-Dec-5-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	5-Dec-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	2.28%	1.70%	1.09%	0.13%	0.11%	0.08%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+165	+121	+91	-7	-2	-2
Re-Offered Yield	3.93%	2.91%	2.00%	0.06%	0.09%	0.06%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.97%**	**2.96%**	**2.07%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+150	+106	+76	-7	-2	-2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	172	130	100	-7	-2	-2
EPCOR (A(L)/-/A-)	153	110	80	-7	-2	-2

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	2.15%	1.59%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+172	+123
Re-Offered Yield	3.87%	2.82%
Commission (bp)	4.00	5.00
All-in Yield	**3.91%**	**2.87%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+157	+108

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	179	132
EPCOR (A(L)/-/A-)	160	112

Scotiabank
28-Nov-16

	5-year
	1-Sep-21
	0.75%
	1.01%
	+93
	1.94%
	7.00
2.01%	

	5-year
	+78

	5-year
	102
	82

Indicative New Issue Spreads

Monday, December 05, 2016

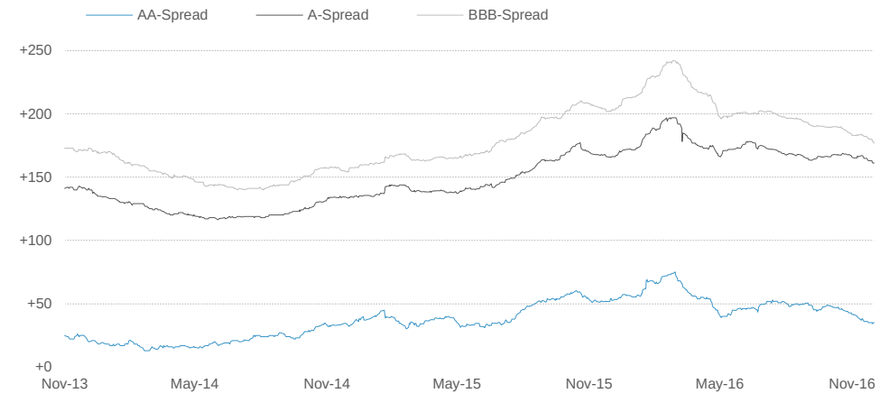
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		3.50% 1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	1.09%	0.08%	1.70%	0.11%	2.28%	0.13%
Indicative Spread	**+91**	-2	**+121**	-2	**+165**	-7
Indicative Re-offer Yield	2.00%	0.06%	2.91%	0.09%	3.93%	0.06%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.072%		2.957%		3.965%	
All-in Spread to GoC curve (bp)	+98		+126		+169	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
29-Nov	Royal Bank of Canada	AA/AA-/Aa3	$225M	1 yr	+15
30-Nov	Royal Bank of Canada	AA/AA-/Aa3	$1,250M	7 yr	+100
29-Nov	Bank of Nova Scotia	AA/A+/Aa3	$750M	10 yr	+107
29-Nov	Bank of Nova Scotia	AA/A+/Aa3	$2,250M	5 yr	+92
29-Nov	HSBC Holdings PLC	-/A/A1	$950M	7 yr	+192
28-Nov	AltaLink L.P.	A/A/-	$450M	30 yr	+157
15-Nov	Morguard Corporation	BBB(L)/-/-	$200M	4 yr	+315

COMPARABLES	Ratings DBRS/Moody's/S&P	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+91**	-2	**+121**	-2	**+165**	-7
Hydro One	A(H)/A3/A	+76	-2	+106	-2	+150	-7
Nova Scotia Power	A(L)/-/BBB+	+100	-2	+130	-2	+172	-7
EPCOR	A(L)/-/A-	+80	-2	+110	-2	+153	-7

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market was active last week, with $5.9 billion priced across 4 transactions. BNS printed the largest Canadian bank transaction done to date, a $3 billion dual-tranche offering. RBC also issued $1.5 billion deposit notes following its earnings release. AltaLink LP issued $450 million 30 year notes. HSBC completed a 7 year $1 billion Maple transaction. Global markets carried positive momentum throughout the week. WTI finished the week up 9%, hitting a YTD high Friday. Canadian corporate spreads were 5 bps better on the week, while equity indices were relatively unchanged. At week end, YTD new issue volumes reached $105.4 billion, 6% ahead of 2015's pace.

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Estimates for the week of December 5 – 9

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
12/06	08:30	Merchandise Trade Balance (C$ bn)	Oct	-2.0	--	-4.1
12/07	10:00	**BoC Interest Rate Announcement (%)**	**Dec 7**	**0.50**	**0.50**	**0.50**
12/08	08:15	Housing Starts (000s a.r.)	Nov	190.0	--	192.9
12/08	08:30	Building Permits (m/m)	Oct	--	--	-7.0
12/08	08:30	Capacity Utilization (%)	3Q	--	--	80.0
12/08	08:30	New Housing Price Index (m/m)	Oct	--	--	0.2
12/08		Morneau and Poloz Announce Woman for New Bank Note				

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
12/03		Fed's Dudley Speaks on Financial Regulation in New York (9:30)				
12/05		Fed's Dudley Speaks on Economy and Policy in New York (8:30)				
12/05		Fed's Evans Speaks on Economy and Policy in Chicago (9:25)				
12/05	10:00	ISM Non-Manufacturing Composite	Nov	55.0	55.1	54.8
12/05		Fed's Bullard to Speak on U.S. Economic Outlook In Arizona (14:05)				
12/06	08:30	Productivity (q/q a.r.)	3Q F	--	3.2	3.1
12/06	08:30	Trade Balance (US$ bn)	Oct	-39.0	-40.0	-36.4
12/06	08:30	Unit Labor Costs (q/q a.r.)	3Q F	--	0.3	0.3
12/06	10:00	Durable Goods Orders (m/m)	Oct F	--	--	4.8
12/06	10:00	Durable Goods Orders ex. Trans. (m/m)	Oct F	--	--	1.0
12/06	10:00	Factory Orders (m/m)	Oct	2.0	2.4	0.3
12/06	10:00	IBD/TIPP Economic Optimism Index	Dec	--	--	51.4
12/07	07:00	MBA Mortgage Applications (w/w)	DEC 2	--	--	5.5
12/07	10:00	JOLTS Job Openings (000s)	Oct	--	--	5486
12/07	15:00	Consumer Credit (US$ bn m/m)	Oct	--	15.3	19.3
12/08		Securities and Exchange Commission Meeting (9:30)				
12/08	08:30	Initial Jobless Claims (000s)	DEC 3	260.0	253.0	251.0
12/08	08:30	Continuing Claims (000s)	NOV 26	2040	2033	2043
12/09	10:00	U. of Michigan Consumer Sentiment	Dec P	--	--	93.8
12/09	10:00	Wholesale Inventories (m/m)	Oct F	--	--	-0.4

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Subject:	Ontario Power Generation - Indicative Issuance Spreads for 11/28/2016
Date:	Monday, November 28, 2016 5:45:59 PM
Attachments:	OPG Weekly Indicative Spreads - November 28, 2016.xlsx Ontario Power Generation-Nov-28-2016.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

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Bank Name	Scotiabank
Date	28-Nov-16

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26	1-Sep-21			
Benchmark Canada Bond Coupon	3.50%	1.50%	0.75%			
Benchmark Yield	2.15%	1.59%	1.01%	-0.05%	-0.02%	-0.01%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+172	+123	+93	-1	-2	-2
Re-Offered Yield	3.87%	2.82%	1.94%	-0.06%	-0.04%	-0.03%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.91%**	**2.87%**	**2.01%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+157	+108	+78	-1	-2	-2

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	179	132	102	0	0	0
EPCOR (A(L)/-/A-)	160	112	82	0	-1	-1

Bank Name
Date

Indicative OPG New Issue Spreads		Current
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-45	1-Jun-26
Benchmark Canada Bond Coupon	3.50%	1.50%
Benchmark Yield	2.20%	1.61%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+173	+125
Re-Offered Yield	3.93%	2.86%
Commission (bp)	4.00	5.00
All-in Yield	**3.97%**	**2.91%**

Primary Comparable (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+158	+110

Other Comparables (S&P/Moody's/ DBRS)		Current
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	179	132
EPCOR (A(L)/-/A-)	160	113

Scotiabank
21-Nov-16

	5-year
1-Sep-21	
0.75%	
1.02%	
+95	
1.97%	
7.00	
2.04%	

	5-year
+80	

	5-year
102	
83	

Indicative New Issue Spreads

Monday, November 28, 2016

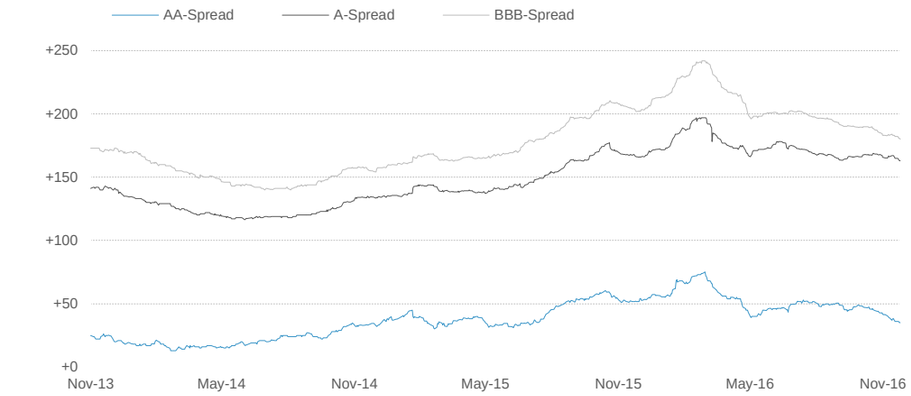
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.75% 1-Sep-21		1.50% 1-Jun-26		3.50% 1-Dec-45	
Interpolated Yield (GoC Yield + Roll)	1.01%	-0.01%	1.59%	-0.02%	2.15%	-0.05%
Indicative Spread	**+93**	-2	**+123**	-2	**+172**	-1
Indicative Re-offer Yield	1.94%	-0.03%	2.82%	-0.04%	3.87%	-0.06%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	2.008%		2.870%		3.911%	
All-in Spread to GoC curve (bp)	+100		+128		+176	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
22-Nov	CI Financial Corp	A(L)/-/A-	$200M	5 yr	+181
17-Nov	PSP Capital Inc.	AAA/AAA/Aaa	$1,000M	7 yr	+83
17-Nov	Merrill Lynch NHA MBS	-/-/-	$800M	5 yr	+76
16-Nov	Central 1 Credit Union	A(H)/A/-	$450M	2 yr	+55
16-Nov	Saputo Inc.	A(L)/-/Baa1	$950M	3 / 31 Yr	+73 / +156
15-Nov	Hydro One Inc.	A(H)/A/A3	$450M	31 yr	+156
15-Nov	Morguard Corporation	BBB(L)/-/-	$200M	4 yr	+315

COMPARABLES	Ratings DBRS/Moody's/S&P	5 Year	WoW	10 Year	WoW	30 Year	WoW
Ontario Power Generation	**A(L)/-/BBB+**	**+93**	-2	**+123**	-2	**+172**	-1
Hydro One	A(H)/A3/A	+78	-2	+108	-2	+157	-1
Nova Scotia Power	A(L)/-/BBB+	+102	0	+132	0	+179	0
EPCOR	A(L)/-/A-	+82	-1	+112	-1	+160	0

DEX UNIVERSE SPREADS



MARKET COMMENTARY

Markets continued with risk-on sentiment in the weeks following the U.S. election. The S&P/TSX Composite Index hit a YTD high mid-week, gaining 3% since the election. The Dow Jones Industrial Avg. Index finished the week at an all-time high (19,152pts), up 4.4% since the election. Canadian corporate credit activity was light last week, with one issuer accessing the market. CI Financial issued $200 million 5 year notes at CRV+181 bps. In the secondary market, flows seen last week were biased to client buying. Canadian spreads finished the week 2-3 bps tighter, in line with the U.S. where IG27 was ~3-3.5 bps tighter. At week end, YTD new issue volumes reached $99.5 billion, 3% ahead of 2015's pace.

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Estimates for the week of November 28 – December 2

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/28		Bank of Canada's Poloz at CD Howe Lecture (19:45)				
11/29	08:30	Current Account (C$ bn a.r.)	3Q	--	-17.1	-19.9
11/30	08:30	IPPI (m/m)	Oct	--	--	0.4
11/30	08:30	Raw Materials Price Index (m/m)	Oct	--	--	-0.1
11/30	08:30	Real GDP (m/m)	Sep	0.1	0.1	0.2
11/30	08:30	Real GDP (q/q a.r.)	3Q	3.5	3.4	-1.6
12/02	08:30	Employment (000s m/m)	Nov	0.0	1.3	43.9
12/02	08:30	Unemployment Rate (%)	Nov	7.0	7.0	7.0
12/02	08:30	Productivity (q/q a.r.)	3Q	--	--	-0.3

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
11/28	10:30	Dallas Fed. Manufacturing Activity	Nov	--	1.5	-1.5
11/29	08:30	GDP (q/q a.r.)	3Q S	2.9	3.0	2.9
11/29	08:30	GDP Deflator (q/q a.r.)	3Q S	--	1.5	1.5
11/29	09:00	S&P/Case-Shiller Home Price Index (m/m)	Sep	--	0.3	0.2
11/29	09:00	S&P/Case-Shiller Home Price Index (y/y)	Sep	--	5.2	5.1
11/29	10:00	Consumer Confidence Index	Nov	100.0	101.2	98.6
11/29		Fed's Dudley Speaks on Puerto Rico Economy (9:15)				
11/29		Fed Governor Powell Speaks (12:40)				
11/30	07:00	MBA Mortgage Applications (w/w)	NOV 25	--	--	5.5
11/30		Fed's Kaplan Speaks in New York (8:00)				
11/30	08:15	ADP Employment Report (000s m/m)	Nov	150.0	160.0	146.9
11/30	08:30	PCE Deflator (m/m)	Oct	0.3	0.3	0.2
11/30	08:30	PCE Deflator (y/y)	Oct	1.5	1.5	1.2
11/30	08:30	PCE ex. Food & Energy (m/m)	Oct	0.1	0.1	0.1
11/30	08:30	PCE ex. Food & Energy (y/y)	Oct	1.7	1.7	1.7
11/30	08:30	Personal Spending (m/m)	Oct	0.5	0.5	0.5
11/30	08:30	Personal Income (m/m)	Oct	0.4	0.4	0.3
11/30	09:45	Chicago PMI	Nov	--	52.0	50.6
11/30	10:00	Pending Home Sales (m/m)	Oct	--	0.2	1.5
11/30		Treasury Department; Internal Revenue Service - Meeting (10:00)				
11/30		Fed Governor Powell Speaks in Washington (11:45)				
11/30		Fed's Mester Speak on Economic Outlook and Monetary Policy (12:35)				
11/30		**U.S. Federal Reserve Releases Beige Book (14:00)**				
11/30		OPEC Meeting: 171st Meeting in Vienna				
12/01		Treasury Department; Internal Revenue Service - Meeting (00:00)				
12/01		Fed's Kaplan Speaks in San Antonio (8:00)				
12/01		Fed's Mester Gives Opening Remarks at Financial Stability Conference (8:30)				
12/01	08:30	Initial Jobless Claims (000s)	NOV 26	255	--	251
12/01	08:30	Continuing Claims (000s)	NOV 19	2040	--	2043
12/01	10:00	Construction Spending (m/m)	Oct	--	0.6	-0.4
12/01	10:00	ISM Manufacturing Index	Nov	52.0	52.1	51.9
12/01		Domestic Vehicle Sales (mn a.r.)	Nov	--	14.0	14.1
12/01		Total Vehicle Sales (mn a.r.)	Nov	17.8	17.7	17.9
12/02	08:30	Nonfarm Employment Report (000s m/m)	Nov	170.0	180.0	161.0
12/02	08:30	Unemployment Rate (%)	Nov	4.9	4.9	4.9
12/02	08:30	Household Employment Report (000s m/m)	Nov	--	--	-43.0
12/02	08:30	Average Hourly Earnings (m/m)	Nov	--	0.2	0.4
12/02	08:30	Average Weekly Hours	Nov	--	34.4	34.4
12/02		Fed Governor Brainard speaks in Washington (8:45)				
12/02		Fed's Tarullo Speaks at Financial Stability Conference (13:00)				

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Cc:	Greg Lawrence (Scotiabank GBM); Fanny Doucet (Scotiabank GBM); Michael Costakos (Scotiabank GBM); Tiffany Sun (Scotiabank GBM); Stephen Lepone (Scotiabank GBM)
Subject:	Ontario Power Generation - Indicative Issuance Spreads for 04/17/2017
Date:	Monday, April 17, 2017 7:49:05 PM
Attachments:	OPG Weekly Indicative Spreads - April 17, 2017.xlsx Ontario Power Generation-Apr-17-2017.pdf estimates.pdf

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Good Evening,

Please find attached the excel copy of our indicative new issue spreads.

Thanks,

D. Gregory Lawrence | Managing Director | Canadian Debt Capital Markets | Scotia Capital Inc.

Scotiabank | Global Banking and Markets

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Bank Name	Scotiabank
Date	17-Apr-17

Indicative OPG New Issue Spreads	Current			Week over Week		
	30-year	10-year	5-year	30-year	10-year	5-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-27	1-Mar-22			
Benchmark Canada Bond Coupon	2.75%	1.00%	0.50%			
Benchmark Yield	2.17%	1.60%	1.06%	-0.09%	-0.08%	-0.08%
Curve Adjustment (bp)						
Spread to GoC Curve (bp)	+152	+110	+85	-2	1	0
Re-Offered Yield	3.69%	2.70%	1.91%	-0.11%	-0.07%	-0.08%
Commission (bp)	4.00	5.00	7.00			
All-in Yield	**3.73%**	**2.75%**	**1.98%**			

Primary Comparable (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Hydro One (A(H)/A3/A)	+137	+95	+70	-2	1	0

Other Comparables (S&P/Moody's/ DBRS)	Current			Week over Week		
Spread to GoC Curve (bp)	30-year	10-year	5-year	30-year	10-year	5-year
Nova Scotia Power (A(L)/-/BBB+)	148	106	81	-2	-4	-4
EPCOR (A(L)/-/A-)	138	96	72	-2	0	0

Bank Name
Date

Indicative OPG New Issue Spreads	Current	
	30-year	10-year
Benchmark Canada Bond Maturity	1-Dec-48	1-Jun-27
Benchmark Canada Bond Coupon	2.75%	1.00%
Benchmark Yield	2.26%	1.68%
Curve Adjustment (bp)		
Spread to GoC Curve (bp)	+154	+109
Re-Offered Yield	3.80%	2.77%
Commission (bp)	4.00	5.00
All-in Yield	**3.84%**	**2.82%**

Primary Comparable (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Hydro One (A(H)/A1/A+)	+139	+94

Other Comparables (S&P/Moody's/ DBRS)	Current	
Spread to GoC Curve (bp)	30-year	10-year
Nova Scotia Power (A(L)/-/BBB+)	150	110
EPCOR (A(L)/-/A-)	140	96

Scotiabank
10-Apr-17

	5-year
	1-Mar-22
	0.50%
	1.14%
	+85
	1.99%
	7.00
	2.06%

	5-year
	+70

	5-year
	85
	72

Indicative New Issue Spreads

Monday, April 17, 2017

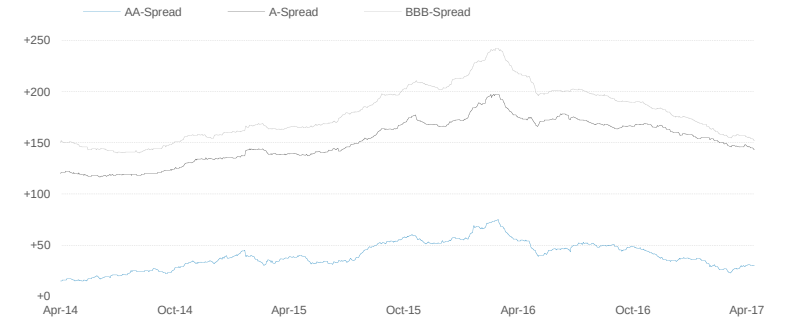
NEW ISSUE SPREADS	5 Year	WoW	10 Year	WoW	30 Year	WoW
Canada Benchmark	0.50%		1.00%		2.75%	
	1-Mar-22		1-Jun-27		1-Dec-48	
Interpolated Yield (GoC Yield + Roll)	1.06%	-0.08%	1.60%	-0.08%	2.17%	-0.09%
Indicative Spread	**+85**	0	**+110**	1	**+152**	-2
Indicative Re-offer Yield	1.91%	-0.08%	2.70%	-0.07%	3.69%	-0.11%
Agency Commission	$0.35		$0.40		$0.50	
Agency Commission BPS	+7		+5		+4	
All-in Canada Yield	1.982%		2.748%		3.729%	
All-in Spread to GoC curve (bp)	+92		+115		+156	

RECENT NEW ISSUES

Date	Issuer	Ratings	Size	Term	Spread
12-Apr	Canadian REIT	BBB/-/-	$125M	5.8 Yr	+174
12-Apr	RBC NHA MBS	AAA/AAA/Aaa	$303M	4.1 Yr	+55
12-Apr	Inter Pipeline Ltd.	BBB(H)/BBB+/-	$500M	7 Yr	+139
11-Apr	Royal Bank of Canada	AA/AA-/Aa3	$155M	1 Yr	+13
11-Apr	Brookfield Infra. Finance	-/BBB+/-	$400M	6.9 Yr	+185
10-Apr	Equitable Bank	BBB/-/-	$150M	2 Yr	+130
10-Apr	Saguaro Resources Ltd	-/-/-	$50M	5 Yr	+738

COMPARABLES	Ratings	5 Year	WoW	10 Year	WoW	30 Year	WoW
	DBRS/Moody's/S&P						
Ontario Power Generation	**A(L)/-/BBB+**	**+85**	0	**+110**	1	**+152**	-2
Hydro One	A(H)/A3/A	+70	0	+95	1	+137	-2
Nova Scotia Power	A(L)/-/BBB+	+81	-4	+106	-4	+148	-2
EPCOR	A(L)/-/A-	+72	0	+96	0	+138	-2

DEX UNIVERSE SPREADS



MARKET COMMENTARY

The Canadian corporate credit market was busy last week, with seven issuers tapping the market for $1.7 billion. Canadian REIT followed the two deals in the real estate space priced the week prior, printing $125 million 5.75 year notes at +174. Inter Pipeline issued $500 million 7 year notes, while Brookfield Infrastructure re-opened its Feb 24's for $400 million. RBC raised ~$450 million across MBS and FRN product while Equitable Bank brought a $150 million 2 year FRN. As expected, the Bank of Canada held rates constant at its meeting on Wednesday, with the market only pricing in a 28% probability of a rate hike by year end. Oil continued to recover, hovering near $53 throughout the week, with prices rising by ~12% over the last three weeks. Canadian corporate spreads ended the week 0-2 bps better, outperforming IG28 which ended the week 2 bps wider. At week end, YTD new issue volumes totaled $32.3 billion, 27% ahead of 2016's pace.

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Estimates for the week of April 17 – 21

CANADA

Date	Time	Indicator	Period	BNS	Consensus	Latest
04/18	08:30	International Securities Transactions (C$ bn)	Feb	--	--	6.2
04/18	09:00	Existing Home Sales (m/m)	Mar	--	--	5.2
04/21	08:30	Core CPI - Common (y/y)	Mar	--	--	1.3
04/21	08:30	Core CPI - Median (y/y)	Mar	--	--	1.9
04/21	08:30	Core CPI - Trim (y/y)	Mar	--	--	1.6
04/21	08:30	CPI, All items (m/m)	Mar	0.6	--	0.2
04/21	08:30	CPI, All items (y/y)	Mar	2.0	--	2.0
04/21	08:30	CPI, All items (index)	Mar	--	--	129.7

UNITED STATES

Date	Time	Indicator	Period	BNS	Consensus	Latest
04/17	08:30	Empire State Manufacturing Index	Apr	--	15.0	16.4
04/17	10:00	NAHB Housing Market Index	Apr	--	70.0	71.0
04/17	16:00	Total Net TIC Flows (US$ bn)	Feb	--	--	110.4
04/17	16:00	Net Long-term TIC Flows (US$ bn)	Feb	--	--	6.3
04/18	08:30	Building Permits (000s a.r.)	Mar	--	1253	1216
04/18	08:30	Housing Starts (000s a.r.)	Mar	1270	1260	1288
04/18	08:30	Housing Starts (m/m)	Mar	-1.4	-2.2	3.0
04/18	09:00	Fed's George Speaks at Bard College Conference				
04/18	09:15	Capacity Utilization (%)	Mar	--	76.2	75.9
04/18	09:15	Industrial Production (m/m)	Mar	0.4	0.5	0.1
04/19	07:00	MBA Mortgage Applications (w/w)	APR 14	--	--	1.5
04/19	12:00	Fed's Rosengren Speaks at Bard College Confere				
04/19	14:00	U.S. Federal Reserve Releases Beige Book				
04/20	08:30	Initial Jobless Claims (000s)	APR 15	245	--	234
04/20	08:30	Continuing Claims (000s)	APR 8	2030	--	2028
04/20	08:30	Philadelphia Fed Index	Apr	27	25	33
04/20	10:00	Leading Indicators (m/m)	Mar	--	0.2	0.6
04/21	09:30	Fed's Kashkari Participates in Q&A in St. Paul, MI				
04/21	10:00	Existing Home Sales (mn a.r.)	Mar	5.5	5.6	5.5
04/21	10:00	Existing Home Sales (m/m)	Mar	0.4	1.3	-3.7

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From: Colleen.Waddell@ontario.ca on behalf of Nelms, Scott (MOF)
To: Mike Manning; Anis Hirani; Colleen Waddell (ENERGY); ASHBOURNE, STEPHEN
Subject: Phone call | Evaluation Discussion

From: Thom, Trevor
To: Mike Manning
Subject: RE:
Date: Thursday, March 30, 2017 3:40:01 PM

Mike – TD is good to go.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Thursday, March 30, 2017 10:49 AM
To: Thom, Trevor
Subject: RE:

Hi Trevor:

I talked to Stephen and his view is that we shouldn't overstate the amount of expected work. He sees it front-end loaded, with a focus on the legislation. We also want to be clear that we will be expecting an independent view (of what is best for the Province), but that we would not want to put TD into an anti-OPG spot and would expect a collaborative process between OPG, its advisors, the Province and its advisor. I suspect that he is right, but as a lawyer is focussed on the legal part of the project, but I think the market/structuring part of the project will also be important and expect that it will also require time, expertise and resources on TD's part. Anyway, just a few thoughts and not trying to twist your arm one way or the other.

Mike

From: Thom, Trevor [mailto:Trevor.Thom@tdsecurities.com]
Sent: Thursday, March 30, 2017 10:15 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject:

Hi. We are having a final internal call at 11AM. I will report back shortly after that. Think we are moving in the right direction.

Regards,
Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com

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From: Thom, Trevor
To: Mike Manning
Subject: RE:
Date: Thursday, March 30, 2017 10:52:39 AM

Thanks. Between you & I, I struggle a little when you suggest "a focus on legislation". But we will discuss as a team.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Thursday, March 30, 2017 10:49 AM
To: Thom, Trevor
Subject: RE:

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From:	Mike Manning
To:	"Thom, Trevor"
Subject:	RE:
Date:	Thursday, March 30, 2017 10:48:48 AM

Hi Trevor:
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From:	Mike Manning
To:	"Hancock, Jamie W - GCM"
Subject:	RE: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies
Date:	Friday, March 03, 2017 8:39:53 AM

416 592 6392

From: Hancock, Jamie W - GCM [mailto:jamie.hancock@baml.com]
Sent: Friday, March 03, 2017 8:38 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies

Thanks do you have his coordinates? Jamie

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 03, 2017 8:37 AM
To: Hancock, Jamie W - GCM
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Hi Jamie:
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From: Hancock, Jamie W - GCM [mailto:jamie.hancock@baml.com]
Sent: Friday, March 03, 2017 8:32 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: FW: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies

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Regards,
Jamie

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Merrill Lynch Canada Inc.
Desk: 416-369-8159
Cell: 416-564-9427
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Ontario Forms New Trust to Tap Markets for Hydro Subsidies
2017-03-02 21:18:47.509 GMT

By Maciej Onoszko

(Bloomberg) -- Ontario Power Generation Inc. will set up a special purpose vehicle that will raise funds to help finance subsidies announced Thursday to curb soaring electricity bills in Canada's most-populous province.

Ontario's largest power generation company will manage the new entity for the province and its electricity system operator, known as IESO. The vehicle will tap bond and possibly equity markets for funding, said Chief Executive Officer Jeff Lyash.

"We've got the scale to do this, we have got access to debt markets, relationships with credit rating agencies, we have the internal capabilities," Lyash said by phone on Thursday. "We're basically a service provider -- think about it like a trust."

Ontario's plan includes refinancing investments in power generation over longer periods to reduce electricity costs in the short term. The province plans to push back the cost of the so-called global adjustment, which is a charge that covers the costs the power industry has incurred as part of its multi-billion dollar investment in facilities.

It will probably take a few months to set up the trust as the province needs to create the regulatory framework for the changes, Lyash said, adding the vehicle will be run separate from the rest of OPG's business. He declined to say how much money the entity would raise.

The trust will most likely access the bond market, but it could raise equity too, Lyash said, adding final decisions haven't been made.

The immediate reduction in the global adjustment will amount to about C$2.5 billion per year on average over the first 10 years, the province said in a presentation of its proposal on Thursday. The additional financing will add up to C$1.4 billion a year in interest payments.

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To contact the editors responsible for this story:
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Christopher DeReza at cdereza1@bloomberg.net
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From:	Hancock, Jamie W - GCM
To:	Mike Manning
Subject:	RE: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies
Date:	Friday, March 03, 2017 8:38:37 AM

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Date: Friday, March 03, 2017 8:37:07 AM

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From:	Hancock, Jamie W - GCM
To:	Mike Manning
Subject:	RE: (BN) Ontario Forms New Trust to Tap Markets for Hydro Subsidies
Date:	Friday, March 03, 2017 8:40:49 AM

Thanks.

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From:	Nelms, Scott (MOF)
To:	Holloway, Harold
Cc:	Mike Manning; Thom, Trevor
Subject:	RE:
Date:	Thursday, April 13, 2017 1:55:39 PM

Thanks Harold. I have circulated with our lawyers and will get back to you.

From: Holloway, Harold [mailto:Harold.Holloway@tdsecurities.com]
Sent: April 13, 2017 10:18 AM
To: Nelms, Scott (MOF)
Cc: mmanning@ofina.on.ca; Thom, Trevor
Subject:
Scott,
As discussed yesterday, I attach a Non-Disclosure Agreement relating to the Fair Hydro Plan and GA Deferral Financing. I hope this is helpful. It is a form which TD has used in the past and we are happy to execute it. Please let me know if you have any questions.
Have a great long weekend.
Harold

Harold R. Holloway | Managing Director, Head of Power and Utilities
Investment Banking, Global Energy and Power Group | **TD Securities Inc.**
TD Tower 8th floor, 66 Wellington Street West, Toronto, ON M5K1A2
T: 416 308 9091 | M: 416 270 5096 | F: 416 983 3176
harold.holloway@tdsecurities.com

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From: John Kim
To: Linda Smith
Cc: Mike Manning
Subject: RE: Amendments for flexibility in OEFC agreement
Date: Tuesday, January 31, 2017 5:57:00 PM

Thanks, we will have a look. Might need to chat with these guys but at first glance, do you see nuclear in this org chart?

From: Linda Smith
Sent: Tuesday, January 31, 2017 4:02 PM
To: John Kim
Cc: Mike Manning
Subject: FW: Amendments for flexibility in OEFC agreement

Hi John

OPG is asking about having the ability to issue debt from their subsidiaries going forward. Ken gave a bit of an explanation below.

From: RYFA Ken -TREASURY [mailto:ken.ryfa@opg.com]
Sent: Tuesday, January 31, 2017 1:58 PM
To: Linda Smith <Linda.Smith@ofina.on.ca>
Subject: RE: Amendments for flexibility in OEFC agreement

Linda,

OK, John will talk to Mike.

I left you a message about item 4 below as I wasn't sure exactly what you mean.

For your information I've attached an OPG subsidiary organization chart – look on the 2nd page. We already have a number of separate legal entities with both assets and debt – UMH Energy Partnership, Lower Mattagami Energy Limited Partnership, PSS Generating Station LP all have assets and corresponding debt (project financing) within the partnership entity. Both the assets and the debt roll up to OPG consolidated financial statements.

The structure that we are considering would work similarly. Below is an illustration of how the structure is expected to work which may answer your question:

Using regulated hydro as an example – call it Reg Hydro Co

OPG owns 100% of Reg Hydro Co

Regulated hydro assets currently in OPG are transferred to Reg Hydro Co

Would likely capitalize Reg Hydro Co with a combination of debt and equity – existing OPG debt with OEFC would stay in OPG but we would likely set up inter-corporate debt between OPG and Reg Hydro Co to reflect the rates and maturity profile of OPG debt with OEFC. However, when we consolidate Reg Hydro Co with OPG Inc. the inter-corporate debt would be eliminated leaving just the existing OPG debt with OEFC.

New debt incurred by Reg Hydro Co would be an obligation of Reg Hydro Co

Since Reg Hydro Co is owned 100% by OPG then the financial position of Reg Hydro Co will be captured in OPG consolidated results – e.g. inter-corporate debt would be eliminated on consolidation and Debt incurred by Reg Hydro Co would show up as debt in OPG consolidated.

Does this answer your question?

Let me think about the best efforts wording.

Thanks,

Ken

From: Linda Smith [mailto:Linda.Smith@ofina.on.ca]
Sent: Tuesday, January 31, 2017 9:52 AM
To: RYFA Ken -TREASURY
Subject: RE: Amendments for flexibility in OEFC agreement

Hi. My comments:

3. This is probably a discussion between John and Mike.

4. Currently, the charge for the loan is on the corporate balance sheet. How does this change in what you are suggesting? Once I have that information, I will speak to our policy people.

Other item – I would suggest using the words "best efforts to set the rate between 10 and 11 am"

From: RYFA Ken -TREASURY [mailto:ken.ryfa@opg.com]
Sent: Monday, January 30, 2017 6:37 PM
To: Linda Smith <Linda.Smith@ofina.on.ca>
Subject: Amendments for flexibility in OEFC agreement

Linda,

Discussion below is for amendments to the overall credit agreement. The proposed February 2017 draw would be done within the existing agreement with OEFC waiver on the term limit.

Amendments that OEFC is OK with:

1. Change from quarterly to monthly draw
2. Notice period for all draws – 10 business days

Amendment to be discussed with OEFC:

3. Term – our objective is to extend term of OPG's debt so we need very long term notes. Our proposal is –
    a. > 30 years (intent is to do 40 to 50 years) – maximum individual issue $250 million; maximum annual issue $500 million
    b. <= 30 years – amount of annual facility less amount issued under a)

4. Debt borrowed from OEFC by a subsidiary – understood that OEFC needs the entity to be set up but if the entities were established is this something that OEFC would consider?

Let me know whether the OEFC would consider these amendments.

Other items:

Process for setting the base rate – since the rate is generally set by 10 am what if we set bounds around the timing such as 10 am +/- 1 hour. If you need to go outside this range then you would inform us so that we understand the reason for the delay. If the reason is market volatility or difficulty in pricing the requested term then we would have the ability to delay pricing by 1 day and re-evaluate the next day. Thoughts?

Thanks,

Ken

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From: Mike Manning
To: Scott Nelms (ENERGY)
Subject: RE: Catch-up
Date: Monday, April 03, 2017 1:16:13 PM

Hi Scott:
Any chance of getting a look at the draft legislation? Didn't have document referred to in conference call.
Thanks, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, April 03, 2017 10:35 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Catch-up

Hi Steve,
I talked to Trevor Thom and he will be joining the noon internal legislative conversation (he may bring someone). I gave him a quick download of where we are, but if you have a chance to give him a quick call in advance that may be helpful to get him up to speed. I am in meetings between now and noon, so can't join you.
See you shortly,
Scott

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: April 3, 2017 9:25 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Catch-up
Hi Scott. Would you have a few minutes this morning to discuss the agenda for the next few days? I understand that TD may have been invited to an Assistant Deputy MOE meeting at noon – if that's correct, it may make sense to have a chat in advance so TD feels up-to-speed. If you have a minute, please call so we can coordinate. Thanks, Steve
Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

Blakes
Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000, Toronto ON M5L 1A9
Tel: 416-863-2400 Fax: 416-863-2653
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From: Nelms, Scott (MOF)
To: ASHBOURNE, STEPHEN
Cc: Mike Manning
Subject: RE: Catch-up
Date: Monday, April 03, 2017 10:34:44 AM

Hi Steve,
I talked to Trevor Thom and he will be joining the noon internal legislative conversation (he may bring someone). I gave him a quick download of where we are, but if you have a chance to give him a quick call in advance that may be helpful to get him up to speed. I am in meetings between now and noon, so can't join you.
See you shortly,
Scott

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: April 3, 2017 9:25 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Catch-up

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Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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From:	Nelms, Scott (MOF)
To:	Mike Manning
Subject:	RE: Catch-up
Date:	Monday, April 03, 2017 1:17:01 PM

For sure. I will send along in a moment. Pw: "snowplow"

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: April 3, 2017 1:16 PM
To: Nelms, Scott (MOF)
Subject: RE: Catch-up

Hi Scott:

Any chance of getting a look at the draft legislation? Didn't have document referred to in conference call.

Thanks, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, April 03, 2017 10:35 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Catch-up

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See you shortly,

Scott

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: April 3, 2017 9:25 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Catch-up

Hi Scott. Would you have a few minutes this morning to discuss the agenda for the next few days? I understand that TD may have been invited to an Assistant Deputy MOE meeting at noon – if that's correct, it may make sense to have a chat in advance so TD feels up-to-speed. If you have a minute, please call so we can coordinate. Thanks, Steve

Stephen R. Ashbourne
Partner
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From:	Mike Manning
To:	Scott Nelms (ENERGY)
Subject:	RE: Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx
Date:	Monday, April 03, 2017 1:19:37 PM

Thanks Scott

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, April 03, 2017 1:18 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: FW: Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx

Here it is

_____

From: Rehob, James (ENERGY)
Sent: April 2, 2017 7:19 PM
To: Nelms, Scott (MOF); Montgomery, Kaitlin (MOF)
Cc: Calwell, Carolyn (ENERGY/MEDEI/MRI); Shear, Dan (ENERGY)
Subject: RE: Draft 5 Annotated (Blks DS) GOV2016.146.e05 (4).docx

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April 2, 2017

Good day, Scott and Kaitlin. Attached, please find an updated Draft 5 of the bill which is now also populated with annotations to a larger document prepared by Blakes which is their approach to the securitization and OPG's, IESO and Government's roles. Dan and I hope that this will prove to be a very useful product to walk you through tomorrow.

This has also been shared with our Legislative Counsel to keep them "in the loop".

Thank you!

James
For Dan and James

James P. H. Rehob
Senior Counsel
Ministry of the Attorney General
Legal Services Branch
MAG Civil Law Division
Ministry of Energy, Ministry of Economic Development and Growth, Ministry of Research, Innovation and Science, Ministry of Infrastructure, Accessibility Directorate of Ontario

56 Wellesley Street West
Toronto, ON M7A 2E7
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james.rehob@ontario.ca

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From: Gadi Mayman
To: Ken Kandeepan
Cc: Lynsey Wynberg; Ronald Kwan; Mike Manning
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 9:08:31 AM

Yes, that makes sense.

-----Original Message-----
From: Ken Kandeepan
Sent: Thursday, February 16, 2017 9:04 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: FW: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

I suggest that we respond as follows: pls let me know if you have any changes

Hi John

Gadi and others spent considerable time last night discussing the equity injection option and we are unclear as to how the Province will be made whole from a fiscal perspective. I suggest that you proceed with fleshing out this option and once we have all the details a decision can be made as to its viability.

Thanks

Ken k

-----Original Message-----
From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, February 16, 2017 8:28 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Have you had any confirmation from Gadi on the approach. As you know time is of the essence, as a result we are proceeding with discussions with the external auditors this morning to brief them on the approach and get their thoughts on the accounting implications and what needs to be done from a structuring perspective to ensure that the varying objectives can be met. Please advise ASAP.

John

-----Original Message-----
From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
Sent: Wednesday, February 15, 2017 6:37 PM
To: LEE John -TREASURY
Cc: Veinot, Cindy (TBS); Nadine Petsche (MOF); RYFA Ken -TREASURY; CHENG Alec -FIN & C CTRL
Subject: Re: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the

amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

> On Feb 15, 2017, at 6:28 PM, LEE John -TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.
>
> John
>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 5:51 PM
> To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Cc: Nadine Petsche (MOF)
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Hi John and Cindy
>
> I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.
>
> Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.
>
> The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.
>
> But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.
>
> As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.
>
> Thanks
>
> Ken k
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 4:50 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Thank you. Will do.

>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 4:49 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Cindy is free now if you can set up the call.
>
> Thanks
>
> Ken k
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 3:43 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Thank you.
> This is of utmost importance. Please advise soonest.
> Janet
>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 3:37 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.
>
> Thanks
>
> Ken K
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 1:57 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Ken,
>
> Please advise on this call. Timing is important.
> A prompt response would be most appreciated,
>
> Thank you,
> Janet Hahn Parker
>
> 416 592-6749
> j.hahnparker@opg.com
>
> -----Original Message-----

> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 9:30 AM
> To: LEE John -TREASURY
> Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY
> Subject: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> *** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***
>
> Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.
>
>
> Ken K
>
> -----Original Message-----
> From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
> Sent: Wednesday, February 15, 2017 9:09 AM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>
> Subject: RE: OEFC Funding of the Global Adjustment Deferral
>
> Ken:
>
> Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to "in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting entity." I understanding from Alec Cheng (OPG accounting) who was on yesterday accounting call with Nadine (Controllers Office) that OPG GBE status would be put at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.
>
> We can make ourselves available for a call this morning. Please advise.
>
>
> John
>
>
>
> ----------
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>
>
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From: Gadi Mayman
To: Ken Kandeepan
Cc: Lynsey Wynberg; Ronald Kwan; Mike Manning
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 9:08:31 AM

Yes, that makes sense.

-----Original Message-----
From: Ken Kandeepan
Sent: Thursday, February 16, 2017 9:04 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: FW: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

I suggest that we respond as follows: pls let me know if you have any changes

Hi John

Gadi and others spent considerable time last night discussing the equity injection option and we are unclear as to how the Province will be made whole from a fiscal perspective. I suggest that you proceed with fleshing out this option and once we have all the details a decision can be made as to its viability.

Thanks

Ken k

-----Original Message-----
From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, February 16, 2017 8:28 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Veinot, Cindy (TBS) <Cindy.Veinot@ontario.ca>; Nadine Petsche (MOF) <Nadine.Petsche@ontario.ca>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Have you had any confirmation from Gadi on the approach. As you know time is of the essence, as a result we are proceeding with discussions with the external auditors this morning to brief them on the approach and get their thoughts on the accounting implications and what needs to be done from a structuring perspective to ensure that the varying objectives can be met. Please advise ASAP.

John

-----Original Message-----
From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
Sent: Wednesday, February 15, 2017 6:37 PM
To: LEE John -TREASURY
Cc: Veinot, Cindy (TBS); Nadine Petsche (MOF); RYFA Ken -TREASURY; CHENG Alec -FIN & C CTRL
Subject: Re: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the

amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

> On Feb 15, 2017, at 6:28 PM, LEE John -TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.
>
> John
>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 5:51 PM
> To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Cc: Nadine Petsche (MOF)
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Hi John and Cindy
>
> I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.
>
> Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.
>
> The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.
>
> But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.
>
> As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.
>
> Thanks
>
> Ken k
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 4:50 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Thank you. Will do.

>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 4:49 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Cindy is free now if you can set up the call.
>
> Thanks
>
> Ken k
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 3:43 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Thank you.
> This is of utmost importance. Please advise soonest.
> Janet
>
> -----Original Message-----
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 3:37 PM
> To: HAHN PARKER Janet -TREASURY
> Cc: LEE John -TREASURY
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.
>
> Thanks
>
> Ken K
>
> -----Original Message-----
> From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]
> Sent: Wednesday, February 15, 2017 1:57 PM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: LEE John -TREASURY <john.s.lee@opg.com>
> Subject: RE: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> Ken,
>
> Please advise on this call. Timing is important.
> A prompt response would be most appreciated,
>
> Thank you,
> Janet Hahn Parker
>
> 416 592-6749
> j.hahnparker@opg.com
>
> -----Original Message-----

> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
> Sent: Wednesday, February 15, 2017 9:30 AM
> To: LEE John -TREASURY
> Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY
> Subject: EXTERNAL - RE: OEFC Funding of the Global Adjustment Deferral
>
> *** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***
>
> Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.
>
>
> Ken K
>
> -----Original Message-----
> From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
> Sent: Wednesday, February 15, 2017 9:09 AM
> To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>
> Subject: RE: OEFC Funding of the Global Adjustment Deferral
>
> Ken:
>
> Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to "in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting entity." I understanding from Alec Cheng (OPG accounting) who was on yesterday accounting call with Nadine (Controllers Office) that OPG GBE status would be put at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.
>
> We can make ourselves available for a call this morning. Please advise.
>
>
> John
>
>
>
> ----------
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> _____
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From: Ken Kandeepan
To: Gadi Mayman
Cc: Ronald Kwan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 8:59:48 AM

Hi Gadi
My understanding is that when the asset is sold to OPG Trust by the IESO it converts into an intangible asset as opposed to a regulatory asset. This is because there is no OEB requirement in the future in order to write down the asset. The write down can commence theoretically from the point in time the GA recoveries exceed the payment to generators.
With regard to your second question the OPG uses the Province's equity injection (assuming that the approach that's agreed upon) to lend to the Trust. If so yes the OPG makes money on that segment. Having said that the Trust will capitalize the interest expense on their books and actual payment of the interest to OPG commences only when the GA recoveries exceed the payment to generators. There may be issues from the OPG's auditors on how OPG can recognize the interest income given that actual settlement is many years into the future. This is probably why we require further details from OPG on this option.
Thanks
Ken k

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 11:54 PM
To: Ken Kandeepan
Cc: Ronald Kwan ; Lynsey Wynberg ; Mike Manning ; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hmmm. If I understand this chain correctly, and I'm likely missing something important, would we have a non-regulated entity making hundreds of millions of dollars a year that the ratepayers ultimately have to cover in the future? Or would it be OPG, not the trust, making that profit from the interest on their loan to the trust, and if it's OPG making the profit, can't the OEB weigh in? If either's the case, it would be kind of contrary to the very robust language the government has been using about the OEB providing ratepayer protection with privatized electrical utilities.

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
> Thanks
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
Thanks
Ken k

On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
> I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> Ron
>
> On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> > First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
> >
> > On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > Not entirely, though the underlying concept is similar. This is

just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.
Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.
Thanks
Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost? Adding Ron and Mike so that all of us at the OFA are aware of the same facts,

as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

My exchange with John,

as you
can see
little
short
on the
details.
Thanks
Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"
<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG

Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,
all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the

equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be
consolidated
with
OPG
we
need
to
understand
how
OPG
will
show
a
net

interest income.

Thanks

Ken
k

> On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income

that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.

John

-
-
-
-
-
Original Message-
-
-
-
-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John - TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an

equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount

equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all

else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may

be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February

15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-

-
Original
Message-
-
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-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.

This
is
of

utmost
importance.
Please
advise
soonest.

Janet

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the

Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

Original Message-

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent:

Wednesday, February 15, 2017 1:57 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn

Parker

416
592-
6749

j.hahnparker@opg.com

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-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;

HAHN
PARKER
Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***

Exercise
caution.
This
is
an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.

***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email

to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get
back
to
you
as
soon
as
I
hear
from
her.

Ken
K

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-
-
Original
Message-
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-
-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,

February 15, 2017 9:09 AM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: CHENG Alec - FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken - TREASURY <ken.ryfa@opg.com>; LIU Sheen - TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet - TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Got your voice message with

respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the

debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting

entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be
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the
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scheme
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the
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Our
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Treasury
will
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performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.

We can make ourselves

available
for
a
call
this
morning.
Please
advise.

John

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of
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immediately
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and
permanently
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any

attachments,
without
reading
them,
and
destroy
all
copies.
Thank
you.

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From: Ken Kandeepan
To: Gadi Mayman
Cc: Ronald Kwan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Thursday, February 16, 2017 8:59:48 AM

Hi Gadi
My understanding is that when the asset is sold to OPG Trust by the IESO it converts into an intangible asset as opposed to a regulatory asset. This is because there is no OEB requirement in the future in order to write down the asset. The write down can commence theoretically from the point in time the GA recoveries exceed the payment to generators.
With regard to your second question the OPG uses the Province's equity injection (assuming that the approach that's agreed upon) to lend to the Trust. If so yes the OPG makes money on that segment. Having said that the Trust will capitalize the interest expense on their books and actual payment of the interest to OPG commences only when the GA recoveries exceed the payment to generators. There may be issues from the OPG's auditors on how OPG can recognize the interest income given that actual settlement is many years into the future. This is probably why we require further details from OPG on this option.
Thanks
Ken k

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 11:54 PM
To: Ken Kandeepan
Cc: Ronald Kwan ; Lynsey Wynberg ; Mike Manning ; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hmmm. If I understand this chain correctly, and I'm likely missing something important, would we have a non-regulated entity making hundreds of millions of dollars a year that the ratepayers ultimately have to cover in the future? Or would it be OPG, not the trust, making that profit from the interest on their loan to the trust, and if it's OPG making the profit, can't the OEB weigh in? If either's the case, it would be kind of contrary to the very robust language the government has been using about the OEB providing ratepayer protection with privatized electrical utilities.

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
> Thanks
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
Thanks
Ken k

On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
> I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> Ron
>
> On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> > First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
> >
> > On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > Not entirely, though the underlying concept is similar. This is

just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.
Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.
Thanks
Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost? Adding Ron and Mike so that all of us at the OFA are aware of the same facts,

as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

My exchange with John,

as you
can see
little
short
on the
details.
Thanks
Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"
<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG

Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,
all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the

equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be
consolidated
with
OPG
we
need
to
understand
how
OPG
will
show
a
net

interest income.

Thanks

Ken
k

> On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income

that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.

John

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-
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-
-
Original Message-
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-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John - TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an

equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount

equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all

else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may

be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February

15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-

-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.

This
is
of

utmost
importance.
Please
advise
soonest.

Janet

-
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-
-
Original
Message-
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-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the

Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

Original Message-

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent:

Wednesday, February 15, 2017 1:57 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn

Parker

416
592-
6749

j.hahnparker@opg.com

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Original
Message-
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[mailto:Ken.Kandeepan@ofina.on.ca]

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TREASURY

Subject:
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RE:
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Funding
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links
from
unknown
senders
or
unexpected
email.

***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email

to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get
back
to
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as
soon
as
I
hear
from
her.

Ken
K

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Cc: CHENG Alec - FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken - TREASURY <ken.ryfa@opg.com>; LIU Sheen - TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet - TREASURY <j.hahnparker@opg.com>

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proposed
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of
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Our
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Treasury
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We can make ourselves

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a
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Please
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John

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destroy
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copies.
Thank
you.

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Generation
Inc.

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Power
Generation
Inc.

From:	Carlos Yep
To:	Adam Prokop; Bruno Amara; Salman Qadir; Shajee Kathirgamanathan; Mike Manning; John Kim; John Psinas; "Montgomery, Kaitlin (MOF)"; Tobias P. Whitfield (MOF); Mike Manning; James Devine
Subject:	RE: Equity Financing - Working Group Note
Date:	Tuesday, April 04, 2017 12:43:21 PM
Attachments:	BN - GA Equity Injection Structure v7 cy Markup.docx

Adam,

Attached are some minor edits, I have shortened a couple of bullets in order to maintain that the Province has the most flexibility

-The OFA and Energy will retain a dealer to provide independent advice to the Province

-The long term debt issued by OPG Trust may be callable

Re: advisor to be hired by OFA+Energy and call feature of the bond

Regards

Carlos

From: Adam Prokop

Sent: Tuesday, April 04, 2017 10:38 AM

To: Bruno Amara ; Salman Qadir ; Shajee Kathirgamanathan ; Carlos Yep ; Mike Manning ; John Kim ; John Psinas ; 'Montgomery, Kaitlin (MOF)' ; Tobias P. Whitfield (MOF)

Subject: Equity Financing - Working Group Note

Greetings,

Please review the attached equity injection note for internal review only. Please keep this within the Ministry/OFA for now.

Kind regards,

Adam Prokop

Economic Specialist

Office: 416-315-6462

adam.prokop@ofina.on.ca

GA FINANCING – EQUITY INJECTION OVERVIEW

This document serves to provide an overview of the implementation mechanism, timelines and other issues for the GA Financing and the Equity Injection for Ontario Power Generation (OPG) from the Province.

OVERVIEW

- The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.
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        - Staff Comments: Unclear if these financing costs/annual payments will be received by OPG [TBC: from IESO or ratepayers directly]?
- The mechanism by which the financing is conducted is yet to be finalized. Both OPG on behalf of OPG Trust and the OFA on behalf of the Province are separately looking to engage 'financial advisors' for the purpose of determining optimal financing structures, e.g. debt covenants, terms and conditions such as if to be callable, redeemable, etc. [Also see below.]

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- The 51% financing conducted by OPG Trust and the 5% financing via OPG will initially be financed through a short term credit facility which will be obtained by OPG. OPG has communicated that this may be through short term debt, raised from the Canadian money markets.
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OVERVIEW

- The Province is expected to provide monthly equity injections to OPG
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- OPG Trust would receive the notice to purchase the asset from IESO.
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Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

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Electricity Finance Branch, Ontario Financing Authority
April 4, 2017

From:	John Psinas
To:	Bruno Amara; John Kim; Francisco Chinchon; Darren Scanlan; Shajee Kathirgamanathan; Salman Qadir; Adam Prokop; Carlos Yep; Gavin He
Cc:	Mike Manning; Ken Kandeepan; George Sakura
Subject:	RE: Equity Injection
Date:	Tuesday, April 18, 2017 4:30:17 PM
Attachments:	BN - GA Equity Injection Structure_Apr18_markup JP.docx

Bruno,

Some comments. Following up with OPCD to see if Energy will take the lead. Also, will be working with Carlos and TD consultants on the value of the shares.

Thanks.

--John

416-325-8072

From: Bruno Amara
Sent: Tuesday, April 18, 2017 12:52 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Carlos Yep <Carlos.Yep@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Subject: RE: Equity Injection

Hello All:

Attached is a draft note for this afternoon's discussion.

Bruno

<< File: BN - GA Equity Injection Structure_Apr18_markup.docx >>

-----Original Appointment-----
From: John Kim

Sent: Thursday, April 13, 2017 4:19 PM
To: John Kim; Francisco Chinchon; Bruno Amara; Darren Scanlan; Shajee Kathirgamanathan; Salman Qadir; Adam Prokop; Carlos Yep; John Psinas
Cc: Mike Manning; Ken Kandeepan
Subject: Equity Injection
When: Tuesday, April 18, 2017 3:30 PM-4:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Boardroom CEFD LARGE

Hopefully, we can regroup on the equity injection following a busy short week. Hoping to regroup with a sit-down to discuss the path forward.

Thanks,

John

GA FINANCING – EQUITY INJECTION OVERVIEW

The Province is moving ahead with its support for the Global Adjustment (GA) smoothing mechanism. Under the mechanism, the Province will be providing equity injections to Ontario Power Generation Inc. (OPG), representing 44% of total GA financing requirements. This document provides an overview of the proposed GA financing structure, including the provincial equity injections, and discusses steps that must be undertaken by the Province to implement the equity injections.

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The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

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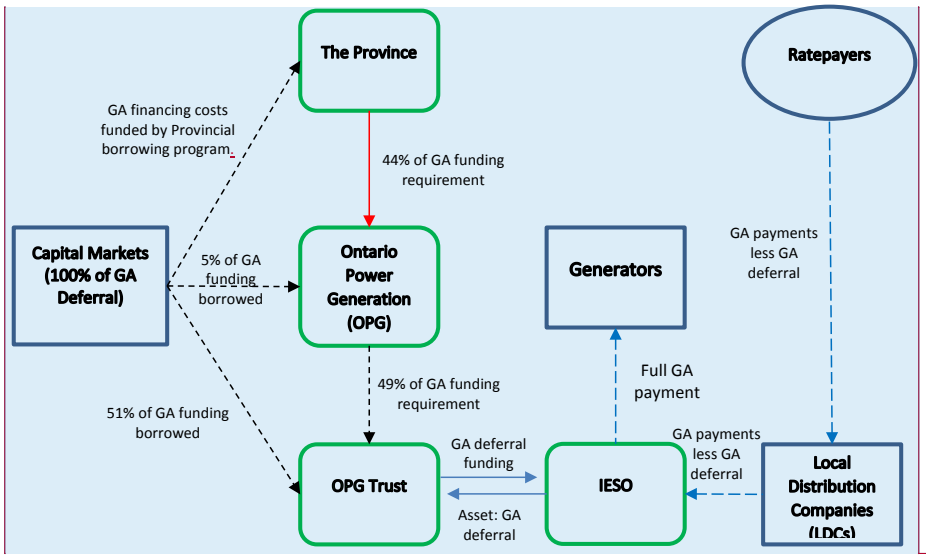
GA Deferral Process



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate

Commented [FC1]: I would suggest rewording the 44% label going to the Province to "Provincial borrowing" as now somehow suggests that there is a perfect matching between the borrowing and the equity contribution.

Commented [BA2R1]: See rewording

capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its equity injection through its annual borrowing program - from issuing debt into the capital markets.

OPG Trust would recover all financing and administrative costs from the ratepayers. OPG Trust may also set up a short-term borrowing facility to facilitate any market timings for its share of debt issuances. [NTD: for discussion?]. [OPG's current position is to not pass the interest/dividend to the Province for its equity injection. Although the Province would be entitled to any net income associated with the incremental equity it would mean that it would be out-of-pocket for servicing the cost of debt associated with the equity contribution.]

EQUITY INJECTION PROCESS OVERVIEW

IESO proposes that OPG Trust would purchase the GA deferral asset on a monthly basis. The Province would, therefore, be required to provide monthly equity injections to OPG if it is to match the purchase (different timing would introduce carrying costs to OPG and/or the Province). In return, OPG would issue new shares to the Province. It is proposed that shares would be purchased at the book value of $20 per share. [for discussion]

Commented [FC3]: I don't believe the $20 mark is relevant. The key concept is that equity is being issued at book value.

Commented [JP4]: Book value or some other valuation needs to be worked out. Not clear it is $20

The proposed process would be as follows:

- OPG Trust would receive notice from the IESO to purchase the asset from IESO.
- The Province in turn would receive notice from OPG for the OFA to provide 44% of the asset for the equity injection. [This asset would be equal to the GA amount being deferred and would not include any financing or administrative costs incurred by OPG or OPG Trust]
- Separately, OPG and OPG Trust would raise debt from the capital markets totaling 56% of the IESO asset value. [Is this proposing that OPG issue debt on its own ~~or through the OEFC~~ as it currently does?]
- There is a 5 business day transaction window from the timing of the notice received by the OFA to payment and settlement with the [or OPG?] IESO.

Commented [JK5]: I think this is because the financing and administrative costs would be recovered through ratepayers?

Commented [JP6]: The financing costs still need to be worked. To be determined.

Commented [DS7]: More for discussion, has OPG (on behalf of the OPG Trust) raised any concerns on borrowing from the markets on a monthly basis?

For the borrowing through OEFC, would just need to ensure approvals are in place in advance as OEFC Board meets quarterly. Shouldn't be an issue though as I think this has been done in the past where OEFC provides a total borrowing limit and OPG can draw down over a period of time.

Decisions and Approvals Required for Province's Equity Financing

The capital contribution (equity injection) to OPG could be carried out in the same way as the capital contribution to Hydro One prior to its initial public offering.

1. The Province, through the Ministry of Energy, would create an "Operating Asset" line for the purchasing of OPG equity. The creation of this line and the annual appropriation for the Operating Asset would require Treasury Board/Management Board of Cabinet approval.

Commented [JP8]: Confirming with OPCD to see if Energy will take the lead.

- The Operating Asset could be either a voted item or a statutory item. While the program would be implemented through legislation, it is assumed that the decisions around the capital contributions or equity injection would be made outside of legislation [largely consistent with the current state of legislative drafting]. Based on this assumption, the analysis that follows assumes the Operating Asset would be categorized as a voted item.

2. Depending on timing, the creation of the Operating Asset would either be included in the Province's Estimates (tabled following the release of the Provincial Budget) or, if this window is not met, in Supplementary Estimates.

    - Operating Assets are fiscally neutral, they represent a balance sheet item, but given they are included in the Estimates they are visible to the public, in this case through the Minister of Energy.

3. The Province would need to seek approval, through either Estimates or Supplementary Estimates, of an appropriation for the amount of the Operating Asset (i.e., approval to make a capital contribution up to the approved amount). The Province could seek approval of a placeholder amount of $1,000, or an estimate of the total projected required capital contribution for that fiscal year.

    - Under the assumption that the Operating Asset is categorized as a voted item, any capital contribution required over and above the approved amount would likely require further TB/MBC approvals. Given the magnitude of the initiative, staff have assumed that finding expense offsets is not a viable option.

4. Following the above approvals, the Province would be able to make the capital contribution into OPG and receive OPG shares in return.

Commented [JK9]: I believe this has to do with the notion that if the ministry can find offsets, then no need to go back to TB for approval.

Commented [FC10R9]: That is correct.

MECHANISM FOR RETURN OF CAPITAL TO PROVINCE

Under the mechanism, the Province will be providing an equity injection into OPG that would then use that contribution to purchase debt from OPG Trust. The current understanding is that that the proposed share price would be $20 at the time of purchase.

Subject to how the equity injection is structured, the Province would be able to sell back the shares to OPG at the same $20 per share in the future. This, however, would only result in the return of its equity injection and without any return, the Province would be responsible for the carrying costs of the equity injection partially offset, at least from an accounting perspective, by

Commented [FC11]: Why is this relevant? What is really relevant for the Province that transactions are done at carrying cost. If in the future the BV of OPG is higher than $20 this would cause the Province a loss before consolidation. I would suggest the focus be on transacting at BV.

any ROE earned on the incremental equity. The following methods could be utilized to allow the Province receives its equity contribution plus a return related to the cost of financing the equity injections.

1. Dividend (Common Shares)

   The Province would incur interest associated with the debt it borrows to finance the 44% equity injection. OPG would expect to have an equal or greater amount related to this 44% interest cost collected from ratepayers through annual cash payments. OPG could elect to provide the interest cost collected back to the Province as a dividend to cover the Province's cost of borrowing for its equity injection [subject to its Board approval].

2. Dividends (Preferred Shares)

   In order to reasonably guarantee a return to the Province, it may be necessary to establish a separate class of preferred shares with a dividend yield associated with the interest cost of the Province's borrowing costs or provide a mechanism for the interest cost to be recovered on a non-cash basis, e.g., through a form of dividend reinvestment plan or through cumulative preferred dividends that are not paid until principal starts being collected from ratepayers [in the event OPG chooses not to return capital during the accumulation of debt phase, which is understood to be OPG's current internal position, TBC].

   A preferred equity structure could potentially impact OPG's credit ratings if rating agencies view the preferred shares as debt rather than equity. In general preferred shares are treated at 50% for rating rations (check).

3. Redemption of Shares at a Premium

   Equity injections can be viewed as a subsidy if the province is not compensated for its risk or cost of financing. That would mean that the Province may need to demonstrate that the expected ROE is higher than the cost of funding these new shares. Under such a scenario, an appropriate pricing or premium on buyback would need to be priced in so that when the Province sells back its shares, it receives a higher price per share than the proposed $20/share book value. OPG staff have signaled to CEFD and CMD staff that their current plan is to not provide the Province with a cash flow, in dividends or otherwise, for the 44% equity injection until the point in time where the ratepayers start to pay down the deferred GA. [TBC]

Commented [JP12]: There should be no carrying costs nor return on investment on a consolidated basis. My understanding is there is no dividends.

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April 12, 2017

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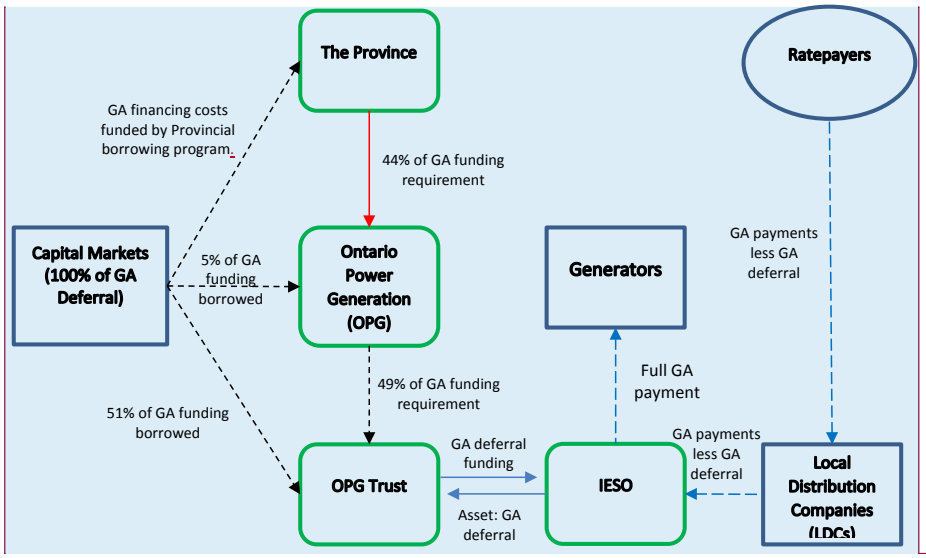

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Electricity Finance Branch, Ontario Financing Authority
April 12, 2017

From:	Bruno Amara
To:	John Kim; Francisco Chinchon; Darren Scanlan; Shajee Kathirgamanathan; Salman Qadir; Adam Prokop; Carlos Yep; John Psinas; Gavin He
Cc:	Mike Manning; Ken Kandeepan
Subject:	RE: Equity Injection
Date:	Tuesday, April 18, 2017 12:52:05 PM
Attachments:	BN - GA Equity Injection Structure_Apr18_markup.docx

Hello All:

Attached is a draft note for this afternoon's discussion.

Bruno

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Sent: Thursday, April 13, 2017 4:19 PM
To: John Kim; Francisco Chinchon; Bruno Amara; Darren Scanlan; Shajee Kathirgamanathan; Salman Qadir; Adam Prokop; Carlos Yep; John Psinas
Cc: Mike Manning; Ken Kandeepan
Subject: Equity Injection
When: Tuesday, April 18, 2017 3:30 PM-4:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Boardroom CEFD LARGE

Hopefully, we can regroup on the equity injection following a busy short week. Hoping to regroup with a sit-down to discuss the path forward.

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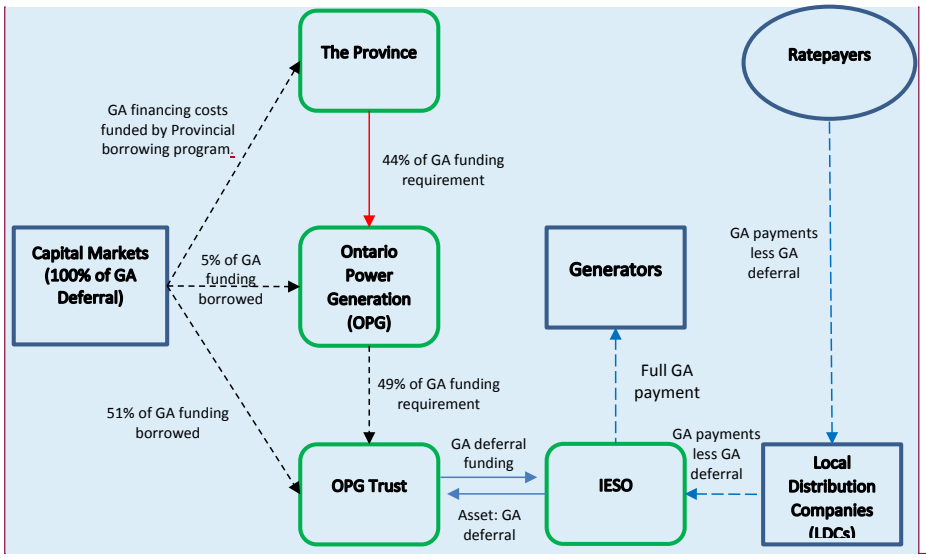

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To:	Bruno Amara; John Kim; Francisco Chinchon; Darren Scanlan; Shajee Kathirgamanathan; Salman Qadir; Adam Prokop; Carlos Yep; Gavin He
Cc:	Mike Manning; Ken Kandeepan; George Sakura
Subject:	RE: Equity Injection
Date:	Tuesday, April 18, 2017 4:30:17 PM
Attachments:	BN - GA Equity Injection Structure_Apr18_markup JP.docx

Bruno,

Some comments. Following up with OPCD to see if Energy will take the lead. Also, will be working with Carlos and TD consultants on the value of the shares.

Thanks.

--John

416-325-8072

From: Bruno Amara
Sent: Tuesday, April 18, 2017 12:52 PM
To: John Kim <John.Kim@ofina.on.ca>; Francisco Chinchon <Francisco.Chinchon@ofina.on.ca>; Darren Scanlan <Darren.Scanlan@ofina.on.ca>; Shajee Kathirgamanathan <Shajee.Kathirgamanathan@ofina.on.ca>; Salman Qadir <Salman.Qadir@ofina.on.ca>; Adam Prokop <Adam.Prokop@ofina.on.ca>; Carlos Yep <Carlos.Yep@ofina.on.ca>; John Psinas <John.Psinas@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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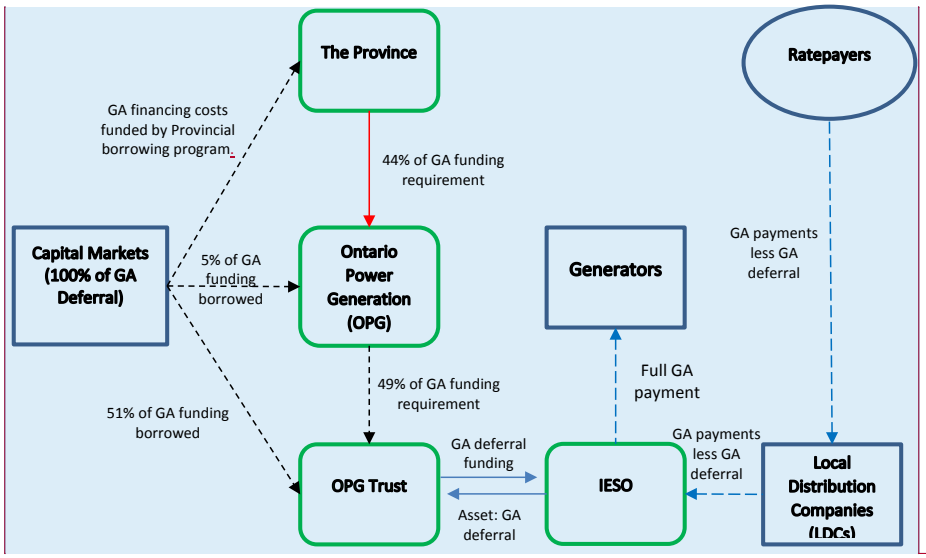

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- [TBC] TBS would provide an annual allocation, with a three-year program review cycle.

Electricity Finance Branch, Ontario Financing Authority
April 12, 2017

From:	Mike Manning
To:	"ASHBOURNE, STEPHEN"
Cc:	VINER, JON
Subject:	RE: Financial Advisor
Date:	Friday, March 31, 2017 9:04:38 AM

Hi Stephen:
I think you have a good point that confidentiality goes with the territory (an understanding not an agreement) in our dealings with our domestic syndicate. Having said that, our Documentation group is working on an NDA and will have a draft on Monday which I will share with you. In terms of a formal engagement letter, I suspect it would mirror the scope of the advisory role which you outlined. An engagement letter wouldn't hurt and expect could be prepared fairly easily (maybe including the NDA). Your thoughts appreciated.
mike

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Friday, March 31, 2017 8:38 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: VINER, JON <JON.VINER@blakes.com>
Subject: RE: Financial Advisor

Thanks Mike. Can we assume that OFA's relationship NDA with TD will be sufficient? Do you think we will need a formal engagement letter for this advisory role? Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000, Toronto ON M5L 1A9
Tel: 416-863-2400 Fax: 416-863-2653
blakes.com[blakes.com] | **Twitter**[twitter.com] | **Unsubscribe**[blakes.com]

Blake, Cassels & Graydon LLP | Barristers & Solicitors | Patent & Trade-mark Agents
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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 31, 2017 8:36 AM
To: ASHBOURNE, STEPHEN; Scott Nelms (ENERGY)
Subject: Financial Advisor

Hi Guys:

It took a bit longer than expected, but TD has been selected as discussed. They have provided assurances that they are fully committed. I've notified BMO & Scotia as well. I will circle back later today on a meeting for early next week.

Mike

This message, including any attachments, is meant only for the use of the individual(s) to whom it is intended and may contain information that is privileged/confidential. Any unauthorized use, copying or disclosure is strictly prohibited. If you are not the intended recipient or have received this message in error, please notify us immediately by reply e-mail and permanently delete this message, including any attachments, without reading them, and destroy all copies. Thank you.

From:	Gadi Mayman
To:	Scott Nelms (ENERGY); Mike Manning
Cc:	Nancy Kennedy (MOHLTC)
Subject:	RE: Financial Advisor
Date:	Friday, March 24, 2017 11:15:19 AM

We pay TD plenty of commissions for underwriting our bonds, and those commissions are understood to also include providing other services to us, including advice, so I don't think that I'd consider this as free advice and don't see the need to pay more money to them beyond what we already pay.

Gadi

-----Original Message-----
From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Friday, March 24, 2017 11:12 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Financial Advisor

I talked this over with Serge. He is comfortable moving forward with one of the banks (maybe TD?). Although free advice sounds good, he was worried about perception and conflicts. His preference is to have Blakes procure their services. Any concerns with that approach?

-----Original Message-----
From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 24, 2017 10:41 AM
To: Mayman, Gadi (OFA); Nelms, Scott (MOF)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

Hi Gadi:
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Subject: Re: Financial Advisor

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Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
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I'd be happy to discuss further to get more colour on what you're looking for.

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From: Nelms, Scott (MOF)
Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

Hi Gadi,

Have you had any dealings with the financial folks listed below? If so any thoughts?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blackberry.com&d=DwIF_g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=3CXvpkRBdXO8bo6dIvXPkZDYa_kYL1UPZc_YCOdjLsg&s=QjbgTIleYB-TAsaUYgd3FdIujgwRRK1DPI5zTAO82fU&e= >)

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

I spoke with Alan Hibben. He's fully engaged on the file with OPG. He suggested three other firms/people -- Origin Financial, Blair Franklin, and Bill Gula (Hanslep LLP). Carolyn, suggest you chat with Judy if Blakes has worked with any of the above. Scott, you could talk to Gadi etc if he has some thoughts on the above as well.
Let's group after your chats.
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From: Nelms, Scott (MOF)
To: Mike Manning; Gadi Mayman
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor
Date: Friday, March 24, 2017 11:12:24 AM

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Cc: Kennedy, Nancy (MOF)
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Subject: FW: Financial Advisor

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Thanks,
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From: Mike Manning
To: Gadi Mayman; Scott Nelms (ENERGY)
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor
Date: Friday, March 24, 2017 10:41:06 AM

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From: Nelms, Scott (MOF)
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC); Mike Manning
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Date: Friday, March 24, 2017 9:55:31 AM

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Cc: Kennedy, Nancy (MOF); Manning, Mike (OFA)
Subject: Re: Financial Advisor

I'm not sure how much value added that any of these boutiques would provide. The people that know the markets are the investment bankers that are actually going to be part of the syndicate that will have to market, sell and trade these bonds. Why not have one of TD, Scotia, National or BMO provide this double-checking? If we're worried about the conflict that they are going to give advice that will make it easier to sell the bonds to ultimately make their life as syndicate members easier, then I can see the potential attraction of an advisor that isn't in that business, but why can't Alan be that guy? I don't see that any of those that you've named would provide better external advice to the Province than he would, unless we're concerned that he's too embedded with OPG, but I don't think so.

As for the names you've mentioned, Hansel, if that turns out to be the third one, is run by a lawyer which might be helpful, but I don't know if they know much about bonds, maybe that's where Bill Gula comes in, Blair Franklin definitely knows bonds, as Fred Mifflin used to be head of government Finance at BMO many years ago and they advised the Feds on Muskrat Falls, and I haven't heard of Origin.

I've added Mike, because he knows way more about the bond market and what investors will want than anyone we've talked about in this exchange, so he may have some ideas as to where the Province should go for external advice.

Hope that helps.

Gadi
Original Message
From: Nelms, Scott (MOF)
Sent: Friday, March 24, 2017 8:45 AM
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor

Hi Gadi,

Energy and Blakes suggest that the Province needs its own financial advisor to test what we are hearing from OPG. As I understand it, there are some elements that OPG believes are requirements in the legislation. The Province would like someone with a market perspective (in addition to your team) that can test the need for each of those requirements as they arise. Given timing, they need someone who can be available in real time to provide this advice.

I will circle back as to whether that is Hansell and not Hanslep. Let me know if there are other names that you might suggest.

Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>

Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
Subject: Re: Financial Advisor

Hi Scott, what is it that we're looking for from a financial advisor? Is this to help with the structuring of OPG Trust's debt issuance? I know Blair Franklin, and they advised Canada on Muskrat Falls. I'm not familiar with Origin, and I don't know Bill Gula, but is that Hansell LLP, not Hanslep?

In any case, I'm not sure what any of them bring to the table beyond what the three banks already engaged would provide, with Alan and the OFA weighing in when their inevitable conflicts get in the way?

I'd be happy to discuss further to get more colour on what you're looking for.

Gadi

Original Message
From: Nelms, Scott (MOF)
Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

Hi Gadi,

Have you had any dealings with the financial folks listed below? If so any thoughts?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blackberry.com&d=DwIF_g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=3CXvpkRBdXO8bo6dIvXPkZDYa_kYL1UPZc_YCOdjLsg&s=QjbgTIleYB-TAsaUYgd3FdIujgwRRK1DPI5zTAO82fU&e= >)

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

I spoke with Alan Hibben. He's fully engaged on the file with OPG. He suggested three other firms/people -- Origin Financial, Blair Franklin, and Bill Gula (Hanslep LLP). Carolyn, suggest you chat with Judy if Blakes has worked with any of the above. Scott, you could talk to Gadi etc if he has some thoughts on the above as well.
Let's group after your chats.
Serge

Sent from my iPad

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From: Nelms, Scott (MOF)
To: Mike Manning; "ASHBOURNE, STEPHEN"
Subject: RE: Financial Advisor
Date: Friday, March 31, 2017 8:42:26 AM

Excellent news! Thanks Mike. Having TD on board will be very helpful for the process.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 31, 2017 8:36 AM
To: 'ASHBOURNE, STEPHEN'; Nelms, Scott (MOF)
Subject: Financial Advisor

Hi Guys:

It took a bit longer than expected, but TD has been selected as discussed. They have provided assurances that they are fully committed. I've notified BMO & Scotia as well. I will circle back later today on a meeting for early next week.

Mike

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From: ASHBOURNE, STEPHEN
To: Mike Manning
Cc: VINER, JON
Subject: RE: Financial Advisor
Date: Friday, March 31, 2017 8:38:20 AM

Thanks Mike. Can we assume that OFA's relationship NDA with TD will be sufficient? Do you think we will need a formal engagement letter for this advisory role? Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 31, 2017 8:36 AM
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Subject: Financial Advisor

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From: Nelms, Scott (MOF)
To: Mike Manning; "ASHBOURNE, STEPHEN"
Subject: RE: Financial Advisor
Date: Thursday, March 30, 2017 10:37:40 AM

I had assumed this would be fairly limited work, focused on providing a check on what OPG is proposing to ensure the construct is financeable at a reasonable cost. Hopefully they can get comfortable with that approach without requiring additional compensation. I was in a meeting with John Lee from OPG this morning and confirmed again that this would not impair TD's standing in future syndicates.

-----Original Message-----
From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 30, 2017 10:25 AM
To: 'ASHBOURNE, STEPHEN'
Cc: Nelms, Scott (MOF)
Subject: RE: Financial Advisor

Thanks Stephen. TD is having an internal meeting at 11:00 and will come back to us then. We can discuss with Scott at that time. By the way, do you have a template NDA that we could use. You mentioned you had a few yesterday. Our documentation Group at the OFA doesn't have one off the shelf and it would likely take more time to re-invent the wheel.
Regards, Mike

-----Original Message-----
From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Thursday, March 30, 2017 9:21 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Subject: Re: Financial Advisor

Mike, thanks for the update. This is not really surprising. A couple of thoughts. First, they should not overstate the amount of work - I think it will mostly be at the front-end, commenting on the legislation. Second, they may be realizing there's a possibility of becoming cross-threaded with OPG through the advisor role, leading to a lesser allocation in the future OPG syndicate. I think you might be able to reassure them this should be collaborative and that while the Province is looking for an independent view, TD should not be put into an anti-OPG spot through our process. Happy to discuss further if useful. Regards, Steve

Stephen R. Ashbourne

Partner

stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>

Dir: 416-863-3086<tel:416-863-3086>

On Mar 30, 2017, at 8:46 AM, Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>> wrote:

Hi Guys:

I didn't get back to the three dealers yesterday but was planning to do it first thing this morning,. TD sent me an email early this morning expressing some concern over compensation. This boils down to their expected role in future OPG syndicates, and I think that they recognized that this is a bigger resource commitment than they first thought based on our meeting yesterday. I cannot give them an guaranteed syndicate allocation. I explained that to Trevor and he will come back to me shortly based on his conversation with the senior TD team. Thoughts appreciated and I will get back to you shortly.

Mike

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From: Mike Manning
To: "ASHBOURNE, STEPHEN"
Cc: Scott Nelms (ENERGY)
Subject: RE: Financial Advisor
Date: Thursday, March 30, 2017 10:25:22 AM

Thanks Stephen. TD is having an internal meeting at 11:00 and will come back to us then. We can discuss with Scott at that time. By the way, do you have a template NDA that we could use. You mentioned you had a few yesterday. Our documentation Group at the OFA doesn't have one off the shelf and it would likely take more time to re-invent the wheel.
Regards, Mike

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From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Thursday, March 30, 2017 9:21 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Subject: Re: Financial Advisor

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Partner

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Mike

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From: Nelms, Scott (MOF)
To: Gadi Mayman; Mike Manning
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor
Date: Friday, March 24, 2017 2:56:17 PM

Further to this, Steve Ashbourne from Blakes will join us, assuming we can schedule something with BMO and TD.

-----Original Message-----
From: Nelms, Scott (MOF)
Sent: March 24, 2017 1:05 PM
To: 'Gadi Mayman'; Manning, Mike (OFA)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

Thanks for the suggestion. This works for Energy. Serge asks that someone from Blakes join us to select between TD and BMO. I am tracking down a name for that.

-----Original Message-----
From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: March 24, 2017 11:20 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

We do have an underwriting agreement with them already, which I'd suggest would cover this. Mike and I are in my office now, and his suggestion is that he will call TD and BMO today and ask them to come in for half an hour each early next week to discuss how they could provide value in this process. A bit of competition is probably a good idea, and Mike has narrowed it down to these two as the best options given that RBC and CIBC are already taken by OPG. Scott, would you be able to come over here for those discussions, and then between you and Mike, you can decide which of the two would be the best fit?

Gadi

-----Original Message-----
From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Friday, March 24, 2017 11:17 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>
Subject: RE: Financial Advisor

Ok. Good point. Can we set up some sort of formal contract with them?

-----Original Message-----
From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: March 24, 2017 11:15 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

We pay TD plenty of commissions for underwriting our bonds, and those commissions are understood to also include providing other services to us, including advice, so I don't think that I'd consider this as free advice and don't see the need to pay more money to them beyond what we already pay.

Gadi

-----Original Message-----
From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Friday, March 24, 2017 11:12 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>

Subject: RE: Financial Advisor

I talked this over with Serge. He is comfortable moving forward with one of the banks (maybe TD?). Although free advice sounds good, he was worried about perception and conflicts. His preference is to have Blakes procure their services. Any concerns with that approach?

-----Original Message-----
From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 24, 2017 10:41 AM
To: Mayman, Gadi (OFA); Nelms, Scott (MOF)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

Hi Gadi:
I think having dealer advice on our side would be beneficial. I expect that OPG will have us outgunned with the dealer input that they will be receiving. It would be quite easy for us to pick from our dealer syndicate (thinking TD or BMO or Scotia Capital) and hopefully benefit from the advice we would receive. This could be done very quickly (i.e., as early as next week) and I expect could be done at no cost. The larger dealers would have utilities and U.S. expertise which would be beneficial and also have good input into what investors will require going forward. After all, the major Canadian dealers will be the ones making markets and having the most expertise on the structure. They would likely be quite eager to provide us advice on this matter and get involved.
Mike

-----Original Message-----
From: Gadi Mayman
Sent: Friday, March 24, 2017 10:26 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Nancy Kennedy (MOHLTC) <Nancy.Kennedy@ontario.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: Re: Financial Advisor

TD did the Muskrat Falls deal, and structured it in what, at the time, was the most cost-effective way of doing it, but I don't think there was any legislation involved so it didn't have the same complexities. I don't know if there's a particularly big difference between any of the six banks, and they'll all likely push for the most iron clad guarantee that we're able to give, so maybe my idea isn't a great one on reflection, and we should fall back on a Blair Franklin type. Mike, any thoughts?

In the end, it's really about what the accountants say is acceptable or not, so I'm not sure having a second opinion from a financial advisor is of as much value as a second opinion on the direction that E&Y is giving OPG.

Original Message
From: Nelms, Scott (MOF)
Sent: Friday, March 24, 2017 9:55 AM
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC); Mike Manning
Subject: RE: Financial Advisor

Serge talked to Alan yesterday, and apparently Alan feels he is conflicted given his ongoing involvement with OPG. I will float the idea of going to the other banks, as a check. Is there one of the 4 that has a particularly strong team?

-----Original Message-----
From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: March 24, 2017 9:34 AM
To: Nelms, Scott (MOF)
Cc: Kennedy, Nancy (MOF); Manning, Mike (OFA)
Subject: Re: Financial Advisor

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those that you've named would provide better external advice to the Province than he would, unless we're concerned that he's too embedded with OPG, but I don't think so.

As for the names you've mentioned, Hansel, if that turns out to be the third one, is run by a lawyer which might be helpful, but I don't know if they know much about bonds, maybe that's where Bill Gula comes in, Blair Franklin definitely knows bonds, as Fred Mifflin used to be head of government Finance at BMO many years ago and they advised the Feds on Muskrat Falls, and I haven't heard of Origin.

I've added Mike, because he knows way more about the bond market and what investors will want than anyone we've talked about in this exchange, so he may have some ideas as to where the Province should go for external advice.

Hope that helps.

Gadi
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I will circle back as to whether that is Hansell and not Hanslep. Let me know if there are other names that you might suggest.

Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
Subject: Re: Financial Advisor

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In any case, I'm not sure what any of them bring to the table beyond what the three banks already engaged would provide, with Alan and the OFA weighing in when their inevitable conflicts get in the way?

I'd be happy to discuss further to get more colour on what you're looking for.

Gadi

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Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

Hi Gadi,

Have you had any dealings with the financial folks listed below? If so any thoughts?

Thanks,
Scott

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From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

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Let's group after your chats.
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Sent from my iPad

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From: Nelms, Scott (MOF)
To: Gadi Mayman; Mike Manning
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor
Date: Friday, March 24, 2017 1:05:33 PM

Thanks for the suggestion. This works for Energy. Serge asks that someone from Blakes join us to select between TD and BMO. I am tracking down a name for that.

-----Original Message-----
From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: March 24, 2017 11:20 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Cc: Kennedy, Nancy (MOF)
Subject: RE: Financial Advisor

We do have an underwriting agreement with them already, which I'd suggest would cover this. Mike and I are in my office now, and his suggestion is that he will call TD and BMO today and ask them to come in for half an hour each early next week to discuss how they could provide value in this process. A bit of competition is probably a good idea, and Mike has narrowed it down to these two as the best options given that RBC and CIBC are already taken by OPG. Scott, would you be able to come over here for those discussions, and then between you and Mike, you can decide which of the two would be the best fit?

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Sent: March 24, 2017 10:41 AM

To: Mayman, Gadi (OFA); Nelms, Scott (MOF)
Cc: Kennedy, Nancy (MOF)
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Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
Subject: Re: Financial Advisor

Hi Scott, what is it that we're looking for from a financial advisor? Is this to help with the structuring of OPG Trust's debt issuance? I know Blair Franklin, and they advised Canada on Muskrat Falls. I'm not familiar with Origin, and I don't know Bill Gula, but is that Hansell LLP, not Hanslep?

In any case, I'm not sure what any of them bring to the table beyond what the three banks already engaged would provide, with Alan and the OFA weighing in when their inevitable conflicts get in the way?

I'd be happy to discuss further to get more colour on what you're looking for.

Gadi

Original Message
From: Nelms, Scott (MOF)
Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

Hi Gadi,

Have you had any dealings with the financial folks listed below? If so any thoughts?

Thanks,
Scott

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From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

I spoke with Alan Hibben. He's fully engaged on the file with OPG. He suggested three other firms/people -- Origin Financial, Blair Franklin, and Bill Gula (Hanslep LLP). Carolyn, suggest you chat with Judy if Blakes has worked with any of the above. Scott, you could talk to Gadi etc if he has some thoughts on the above as well.
Let's group after your chats.
Serge

Sent from my iPad

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From: ASHBOURNE, STEPHEN
To: Mike Manning
Subject: RE: Financial Advisor
Date: Friday, March 31, 2017 3:08:22 PM

Hi Mike. Sorry to delay responding. I think the question will really be for TD to raise – the engagement letter will mostly be for their benefit. If they do not feel they need one, then a standalone NDA for OFA's file would be the path we would probably recommend. Regards, Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 31, 2017 9:05 AM
To: ASHBOURNE, STEPHEN
Cc: VINER, JON
Subject: RE: Financial Advisor

Hi Stephen:

I think you have a good point that confidentiality goes with the territory (an understanding not an agreement) in our dealings with our domestic syndicate. Having said that, our Documentation group is working on an NDA and will have a draft on Monday which I will share with you. In terms of a formal engagement letter, I suspect it would mirror the scope of the advisory role which you outlined. An engagement letter wouldn't hurt and expect could be prepared fairly easily (maybe including the NDA). Your thoughts appreciated.

mike

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Friday, March 31, 2017 8:38 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: VINER, JON <JON.VINER@blakes.com>
Subject: RE: Financial Advisor

Thanks Mike. Can we assume that OFA's relationship NDA with TD will be sufficient? Do you think we will need a formal engagement letter for this advisory role? Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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199 Bay Street, Suite 4000, Toronto ON M5L 1A9
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Blake, Cassels & Graydon LLP | Barristers & Solicitors | Patent & Trade-mark Agents
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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 31, 2017 8:36 AM
To: ASHBOURNE, STEPHEN; Scott Nelms (ENERGY)
Subject: Financial Advisor

Hi Guys:

It took a bit longer than expected, but TD has been selected as discussed. They have provided assurances that they are fully committed. I've notified BMO & Scotia as well. I will circle back later today on a meeting for early next week.

Mike

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From:	Ronald Kwan
To:	Gadi Mayman; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	RE: GA Financing Response to Minister"s Request
Date:	Tuesday, April 18, 2017 10:44:13 AM

Hi Gadi,

Did we get the final copy of the Energy letter to OPG?

Ron

From: Gadi Mayman

Sent: April-18-17 9:36 AM

To: Ronald Kwan ; Ken Kandeepan ; Mike Manning

Cc: Anna Strathy ; Gavin He

Subject: Fw: GA Financing Response to Minister's Request

The OFA isn't mentioned in the body of the letter, but given that I'm cc'd with a pretty esteemed list, I'll take that as sufficient.

From: LORD Bernard -BOARDCHAIR <bernard.lord@opg.com>
Sent: Tuesday, April 18, 2017 9:10 AM
To: 'glenn.thibeault@ontario.ca'
Cc: Charles Sousa (MOF); Scott Thompson (CAB); Serge Imbrogno (ENERGY); Gadi Mayman; LYASH Jeffrey -PRESIDENT; HARTWICK Ken -FINANCE; GINTHER Chris -CAO; KING Catriona -OFFCORPSEC; MATHIAS Carlton -OFFCORPSEC
Subject: GA Financing Response to Minister's Request

Hello,

Please see the attached letter from Bernard Lord, Board Chair Ontario Power Generation.

Thanks,

Rosemarie

Rosemarie Hoilett

Executive Assistant - Jeff Lyash President & CEO | Bernard Lord Board Chair

Ontario Power Generation

700 University Ave | H19-A24

Toronto ON M5G 1X6

416-592-2114 | rosemarie.hoilett@opg.com

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Rosemarie

Rosemarie Hoilett

Executive Assistant - Jeff Lyash President & CEO | Bernard Lord Board Chair

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From: Gadi Mayman
To: Mike Manning
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 3:41:18 PM
Attachments: Cabinet Submission - Electricity Price Mitigation_Feb15 FINAL.pdf

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Sorry, I thought that I'd attached it to my original email. Here it is.

From: Mike Manning
Sent: Wednesday, February 15, 2017 3:40 PM
To: Gadi Mayman
Subject: RE: GA Financing Terms

Hi Gadi:

Was there a deck you were going to email me?

Mike

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 10:02 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
Subject: FW: GA Financing Terms

Mike, I don't know how much you know about this, but maybe it's time to bring you up-to-speed if you're not aware of what the government is thinking of doing on electricity rate mitigation. I'd be happy to fill you in whenever it's convenient for you. Ken has been in the loop through the piece, as it's struck me from the beginning that this is far more of an accounting issue than a funding one.

Regards,

Gadi

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 9:59 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: GA Financing Terms

I agree that from a funding perspective the Province, through the OFA (actually the OEFC, but that's just a detail), would be able to accommodate this, so I think it definitely becomes an accounting question. I'm under the impression that OPCD has already been linked in on this, but it would make sense to make sure that they are.

Regards,

Gadi

From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, February 15, 2017 9:56 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: GA Financing Terms

Hi Gadi,

Energy was talking with OPG yesterday about GA Financing modelling. One of the simplifying assumptions in the model is the ability to build up interest without any payments for quite long periods of time (10 years +). This contributes to the debt build up, but allows for the large, early year rate reductions.

OPG is going to reality check this based on what it thinks a 3rd party lender would expect. At a high level, they have suggested that interest capitalization would be unrealistic beyond 1 year.

What do you think is realistic if OFA acts as lender? I assume the Province may have some more flexibility, but would require terms that meet the asset test for accounting purposes. Should we link in with OPCD as well on this question?

Thanks,

Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

Ontario

Electricity Price Mitigation

Ministry of Energy

February 15, 2017

Minister

Deputy Minister

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in transmission and local distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP)).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no new NUG contracting and demand response).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate – $11/month savings, updating Rural or Remote Rate Protection (RRRP) – $45/month savings, expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants and suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.

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

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

- On a number of occasions the Premier has indicated publicly that further relief on electricity prices will be provided to consumers in the near term.

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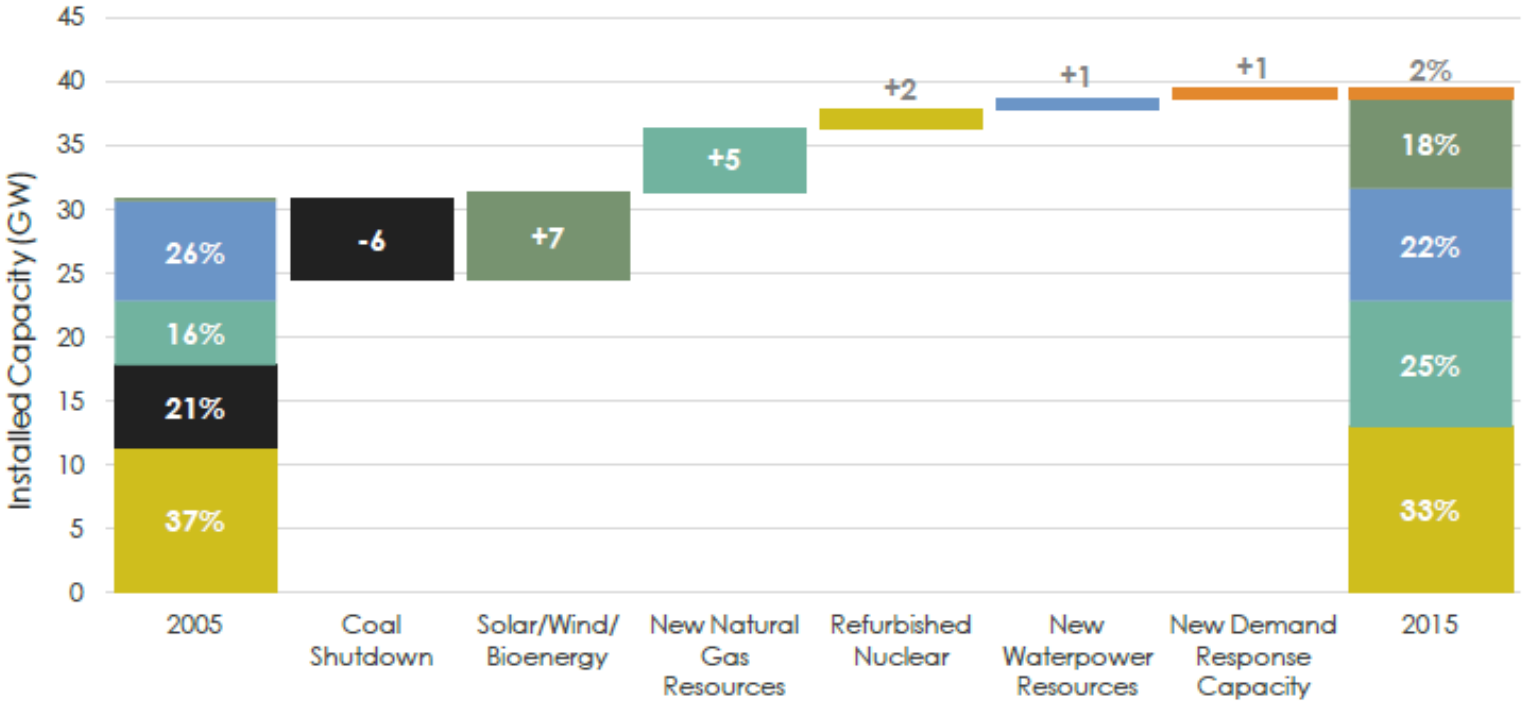
Context – Infrastructure Investments

- In the eleven year period between 2005 and 2015, government added new electrical capacity to Ontario's grid to restore reliability, replace coal and meet environmental objectives.



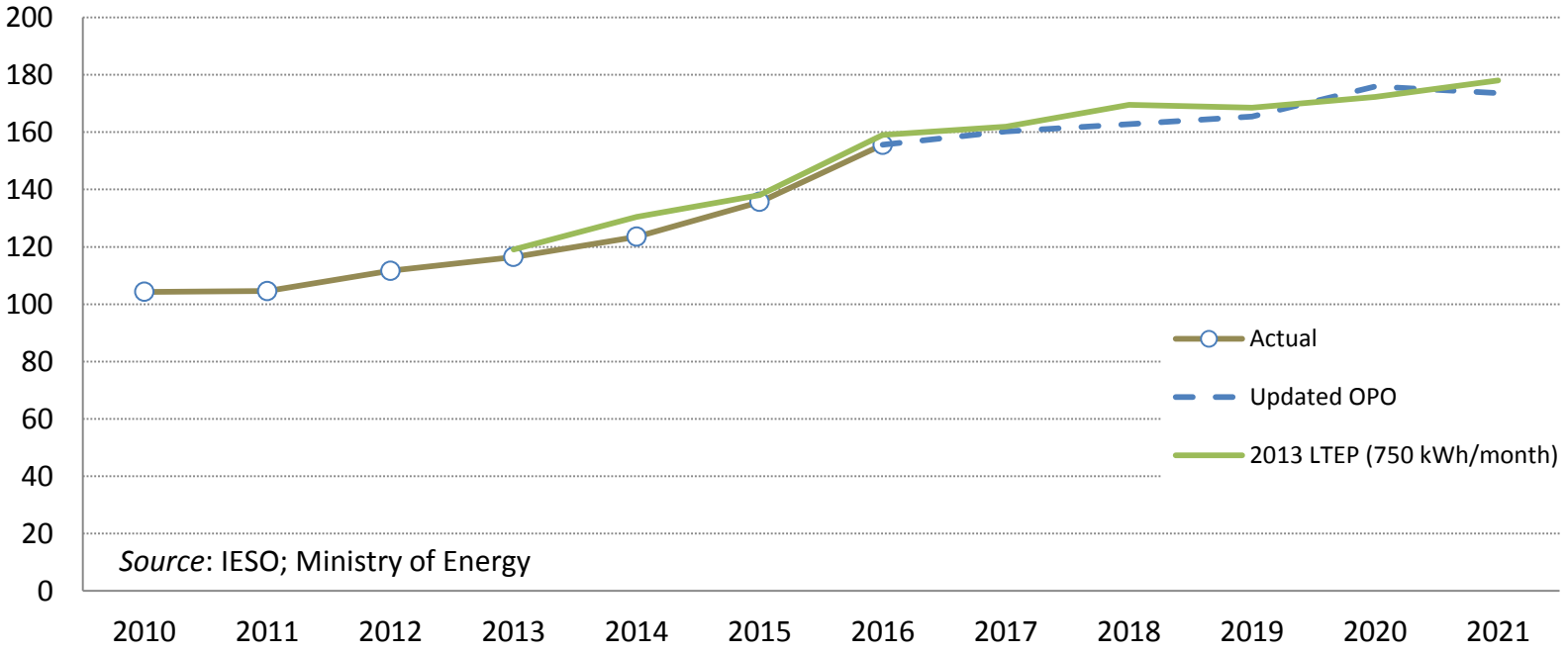
Source: IESO Ontario Planning Outlook

Context – Electricity Prices

- Electricity price increases have generally outpaced inflation. There have been several government policies that have impacted electricity prices over the past several years, including: HST, the Industrial Conservation Initiative, the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge (DRC).

Illustrative Typical Residential Electricity Bills

Historical and Forecast in $/month



Rate Mitigation Proposal

- Three approaches are proposed:

  1) Helping the most vulnerable by enhancing electricity support programs and shifting cost onto the tax-base:
     - Rural or Remote Electricity Rate Protection (RRRP) Enhancement (Delivery Charge Relief);
     - Ontario Electricity Support Program (OESP) Expansion;
     - LDC Affordability Fund; and
     - On-Reserve First Nations Delivery Credit.

  2) Ongoing activities to bend the future cost curve of electricity:
     - Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates; and
     - Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.

  3) Smoothing the global adjustment (GA) to provide significant and immediate rate relief through cost deferral of the GA:
     - Implementation Model; and
     - Smoothing Mechanism.

- The following slides provide additional information on the above initiatives.

ELECTRICITY SUPPORT PROGRAMS TO HELP THE MOST VULNERABLE

Electricity Support Programs to Help the Most Vulnerable

- To date, a number of electricity support programs are funded through the electricity rate-base. There is opportunity to provide support to a more targeted subset of customers who are disproportionately affected by increased electricity costs and to shift these costs to the tax base.

- These customers include:
  - **High Delivery Cost Customers:** Some customers in rural areas where the cost to delivery electricity is high can experience difficulty in reducing their electricity bill through conservation, particularly when reliant on electric heating.
  - **Low-Income Customers:** Rising electricity costs make up a disproportionally large amount of the household expenditures for low-income households.
  - **First Nation On-Reserve Customers:** On-Reserve First Nations customers experience challenges with energy affordability and are seeking to address historical grievances associated with electricity system infrastructure.

- To provide targeted assistance to the customers and alleviate electricity cost burden, ENERGY proposes to:

  a. **Enhance Rural or Remote Rate Protection** (RRRP) by funding its costs through the tax base and providing additional support to customers of designated Hydro One rate classes and other high distribution cost Local Distribution Companies (LDCs).

  b. **Enhance Ontario Electricity Support Program** (OESP) by funding its costs through the tax base and increasing eligible benefits by 50%.

  c. **Establish an LDC Affordability Fund**, providing energy efficiency measures at no or minimal cost to those struggling to pay electricity bills and are ineligible for low-income conservation or support programs.

  d. **Implementing On-Reserve First Nations Delivery Credit**, to remove Delivery charges for on-reserve First Nations customers.

A. Delivery and Distribution Charge – Background

- The **Delivery** line on a typical consumer bill is specific to a consumer's Local Distribution Company (LDCs) and accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.

SAMPLE MONTHLY BILL STATEMENT

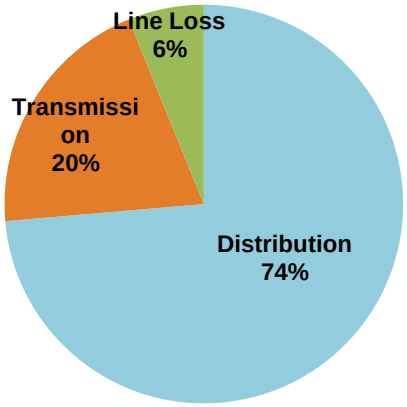
Anytown Hydro-Electric Limited

Account Number:
000 000 000 000 0000

Meter Number:
00000000

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

Cost breakdown of Delivery Line for an Average Residential Bill*



* Toronto Hydro Bill @ 750kWhs

A. Rural or Remote Rate Protection Program – Background

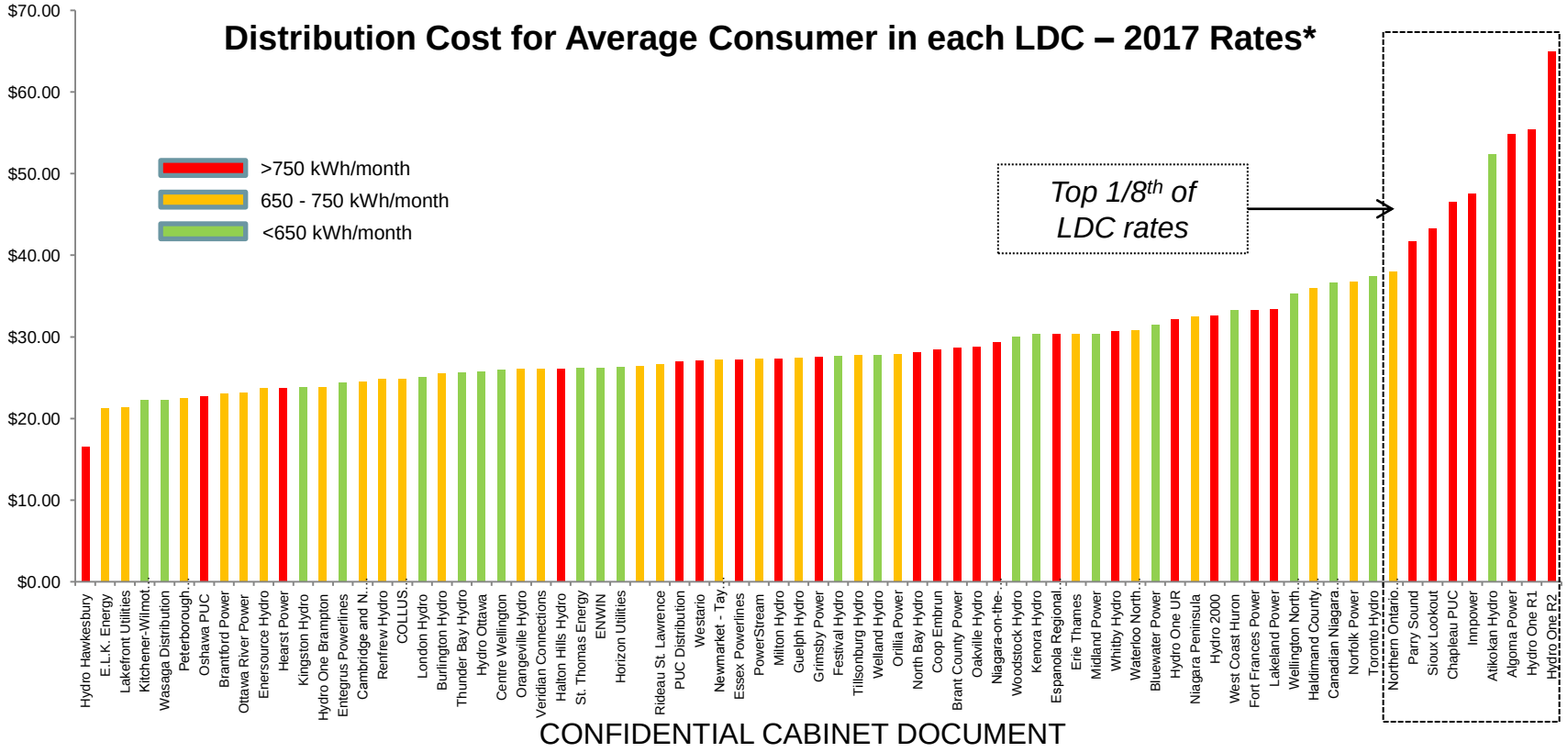
- Rural or Remote Rate Protection (RRRP) mitigates some of the high costs of electricity distribution in rural or remote areas of the Province. It is a legacy program of the old Ontario Hydro and has existed in its current form since 2001.
  - RRRP is funded by ratepayers in Ontario.
- Part of the program helps fund the costs of Hydro One customers classified into the "R2" residential rate class. There are 335,000 R2 customers across the Province. These customers have some of the highest Delivery costs in the Province.
  - From 2001-2016 the program provided $125.4 million annually to help defray these costs.
  - In the 2016 Speech from the Throne, this funding was expanded by $116.4M to a total of $241.9 million.
  - As of Jan 2017 R2 customers receive $60.50/month off their distribution costs.
- These customers still have high delivery and high distribution costs and are often faced with significantly higher than average bills.
  - The higher than average consumption patterns coupled with higher than average distribution rates has resulted in monthly bills many view as no longer affordable.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- While the RRRP helps mitigate some of the higher distribution costs for Hydro One R2 customers, there is an opportunity to provide further relief to consumers in relatively high-distribution cost outlier LDCs (top ~1/8th of distribution rate classes).
  - If expanded to the top 1/8th of distribution costs, this enhancement would also include Hydro One R1 customers (medium density), as well as LDCs with high distribution costs including: Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma.
- Mitigation could be provided by harmonizing distribution rates for these LDCs at the lowest distribution rate paid by an average consumer in this group.
  - Based on projected 2017 LDC rates, the lowest distribution rate paid by an average consumer in this group would be ~$38/month (with the highest being $65).
  - Is consistent with the OEB's mandated move to fully fixed distribution rates for all LDCs.
  - An estimated 700,000 customers would benefit from these enhancements.
  - Setting a lowest distribution rate across these LDCs would help mitigate geographic-based differences in rates for the consumers who are most impacted and often see such differences as inequitable.
- Mitigation for all electricity consumers would be provided by moving the existing RRRP program costs and the proposed enhancements from the electricity rate base to the tax-base.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- The table below shows what 2017 distribution costs are projected to be for the average consumer within each LDC across the province, and highlights the highest-cost distribution rates.
- The charts on the following slides show what the benefits would be in each LDC if the fiscal plan was used to support harmonizing distribution costs for customers of the LDCs in the top ~1/8th of rate classes at $38/month.



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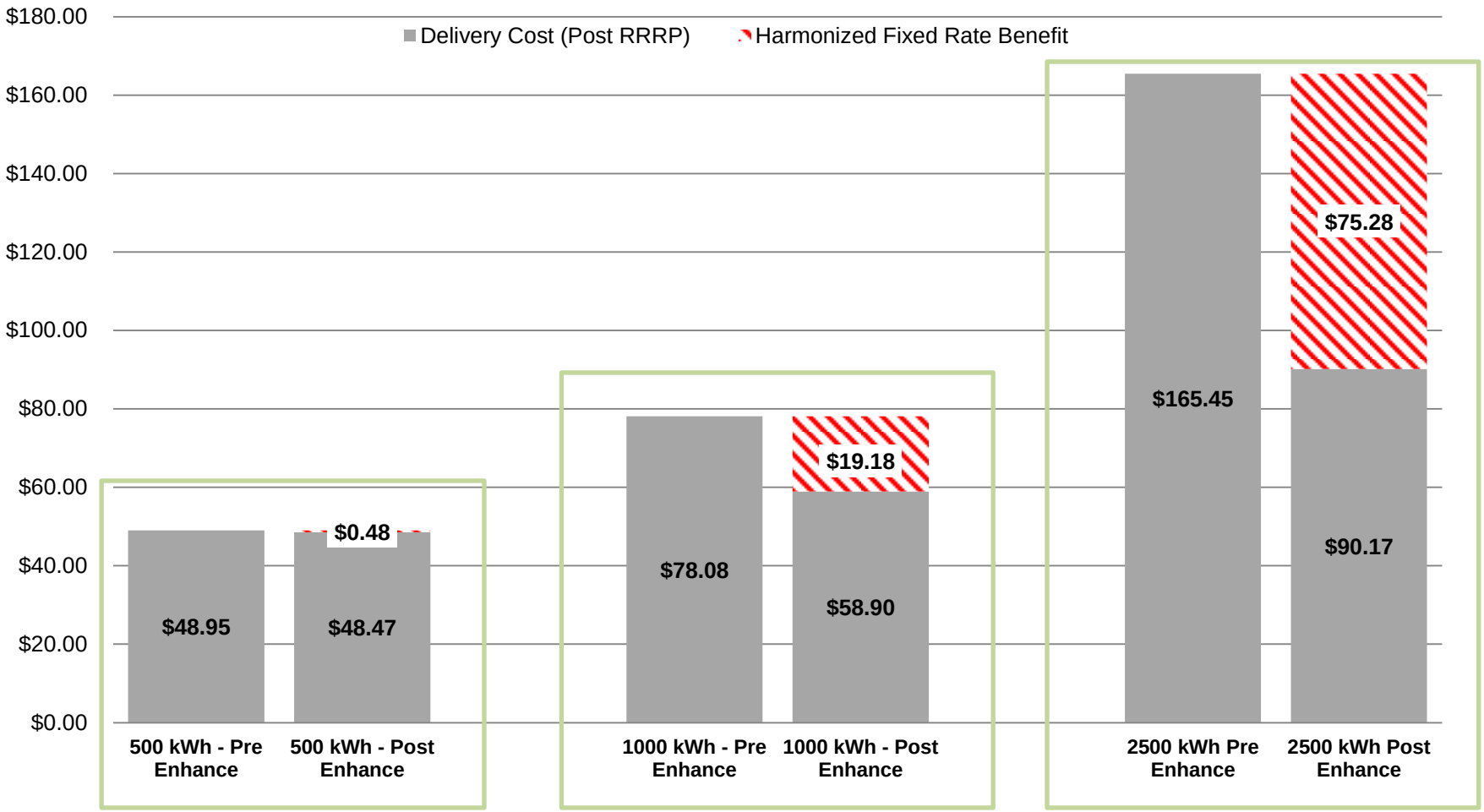
2017 Approved and Proposed (Decisions Pending – rates are subject to change).

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R2)



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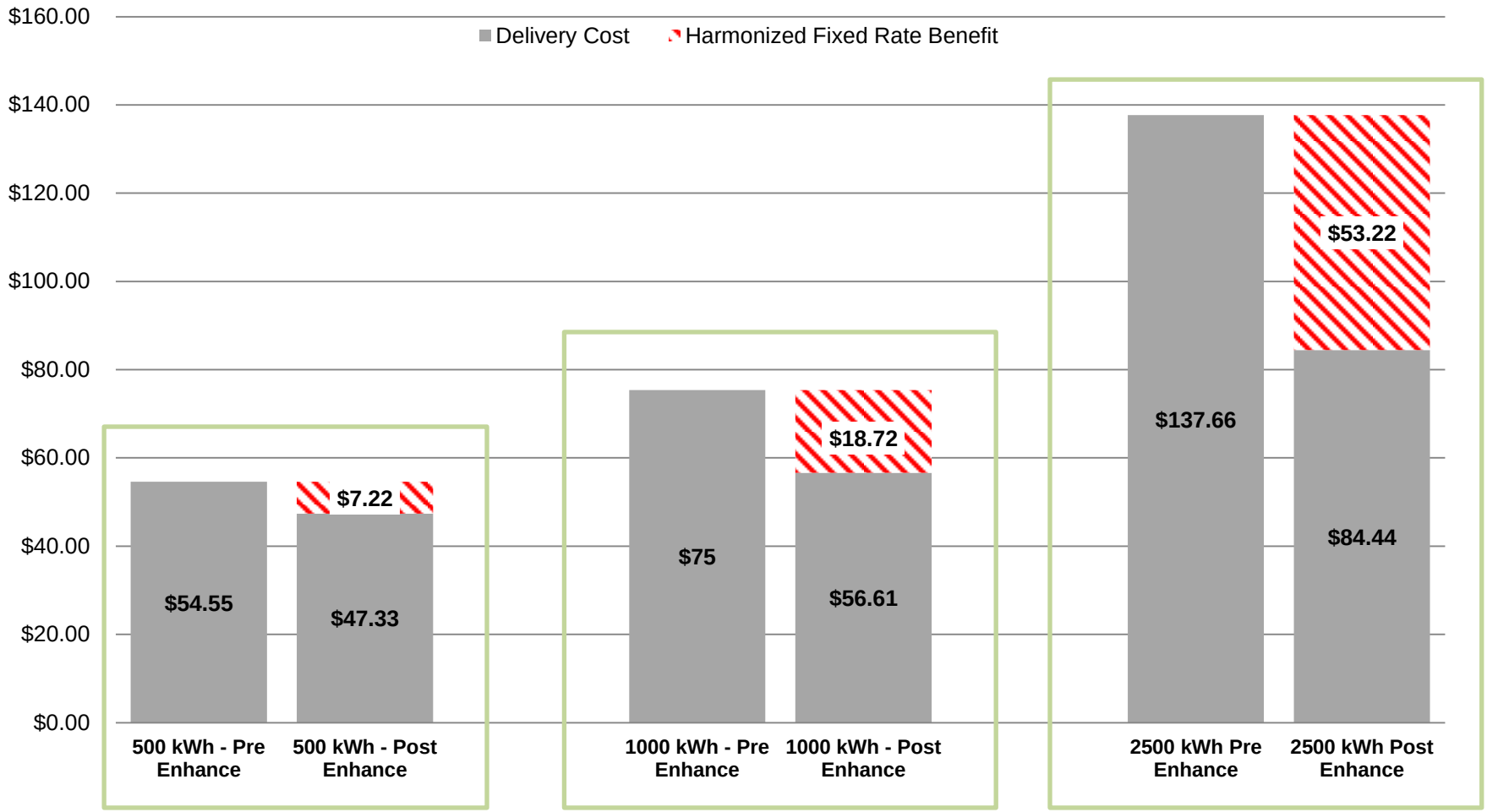
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R1)



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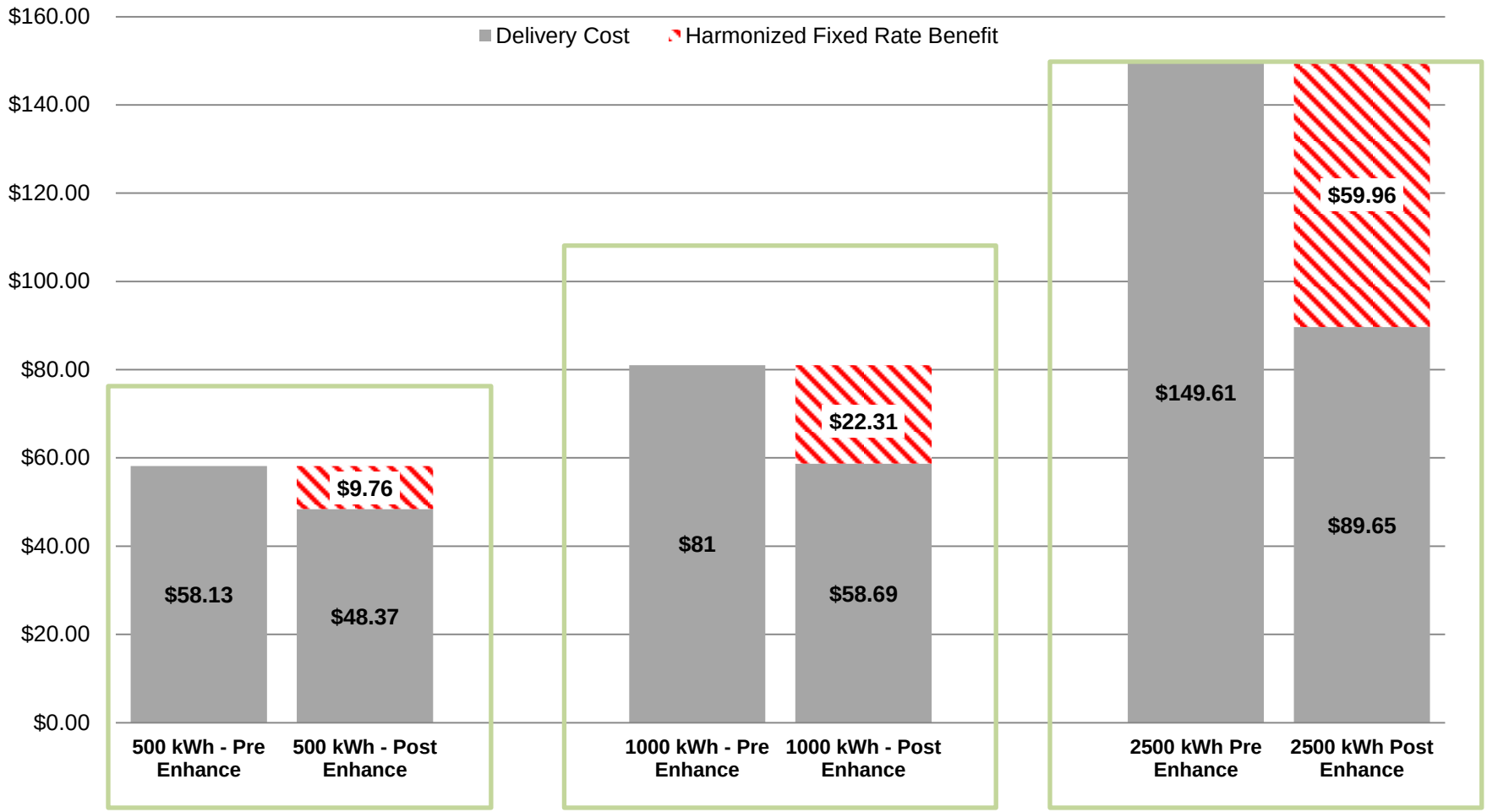
A. Harmonized Distribution Cost – Delivery Line Impact (Algoma Power)



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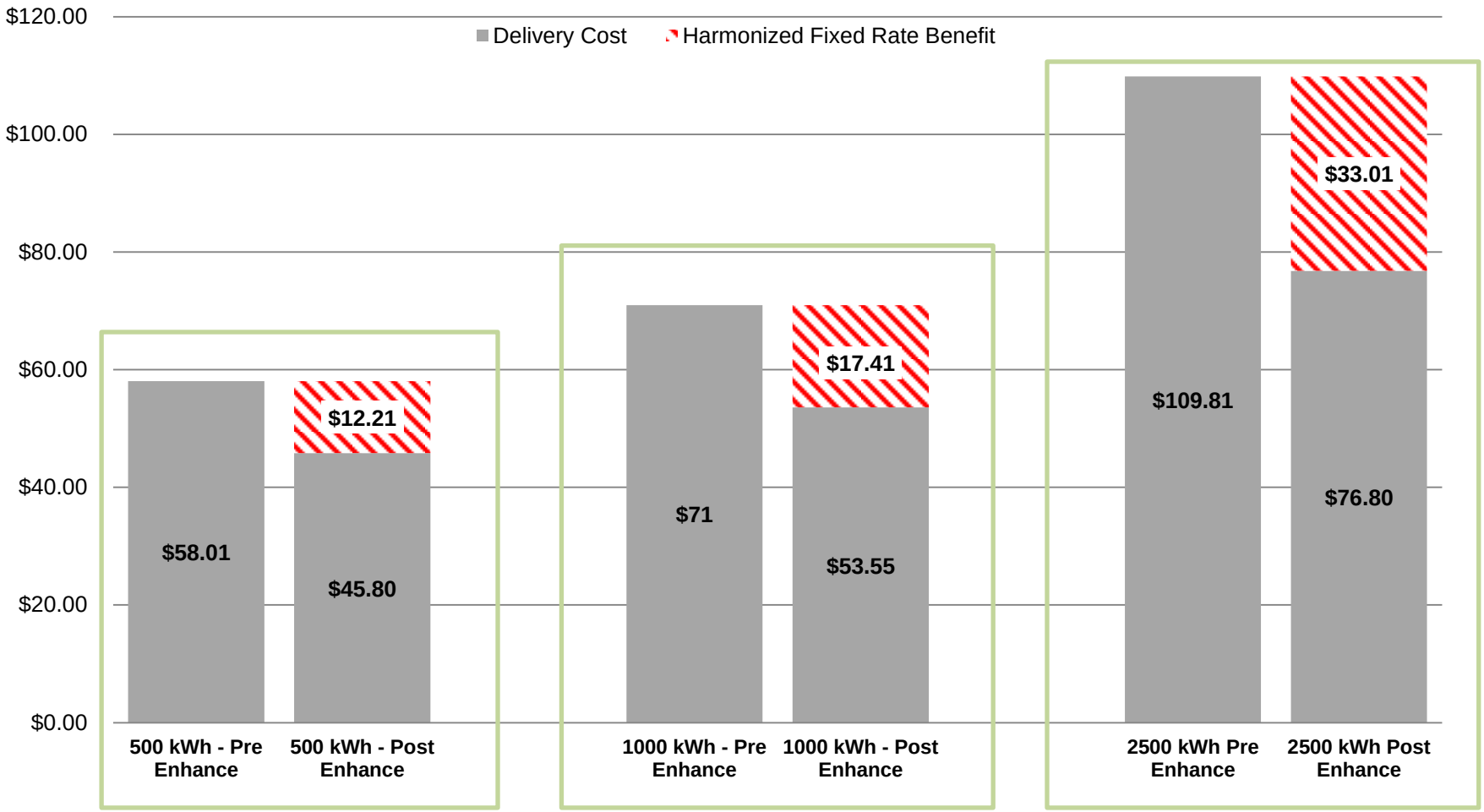
Note: *Rates are for 2017 (either approved or proposed).*
Algoma Power receives RRRP to support operational costs.

A. Harmonized Distribution Cost – Delivery Line Impact (Atikokan Hydro)



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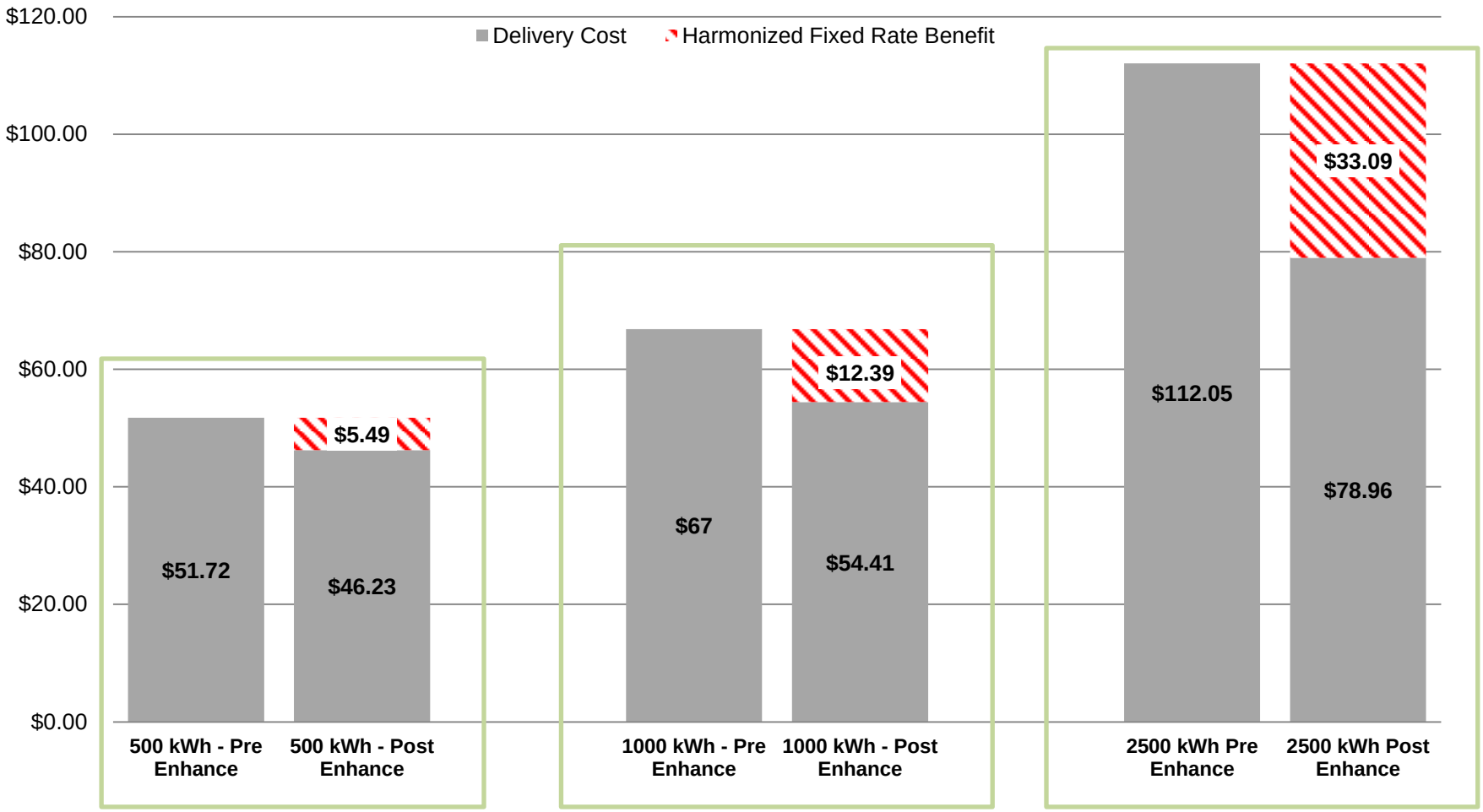
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (InnPower)



Note: *Rates are for 2017 (either approved or proposed)*

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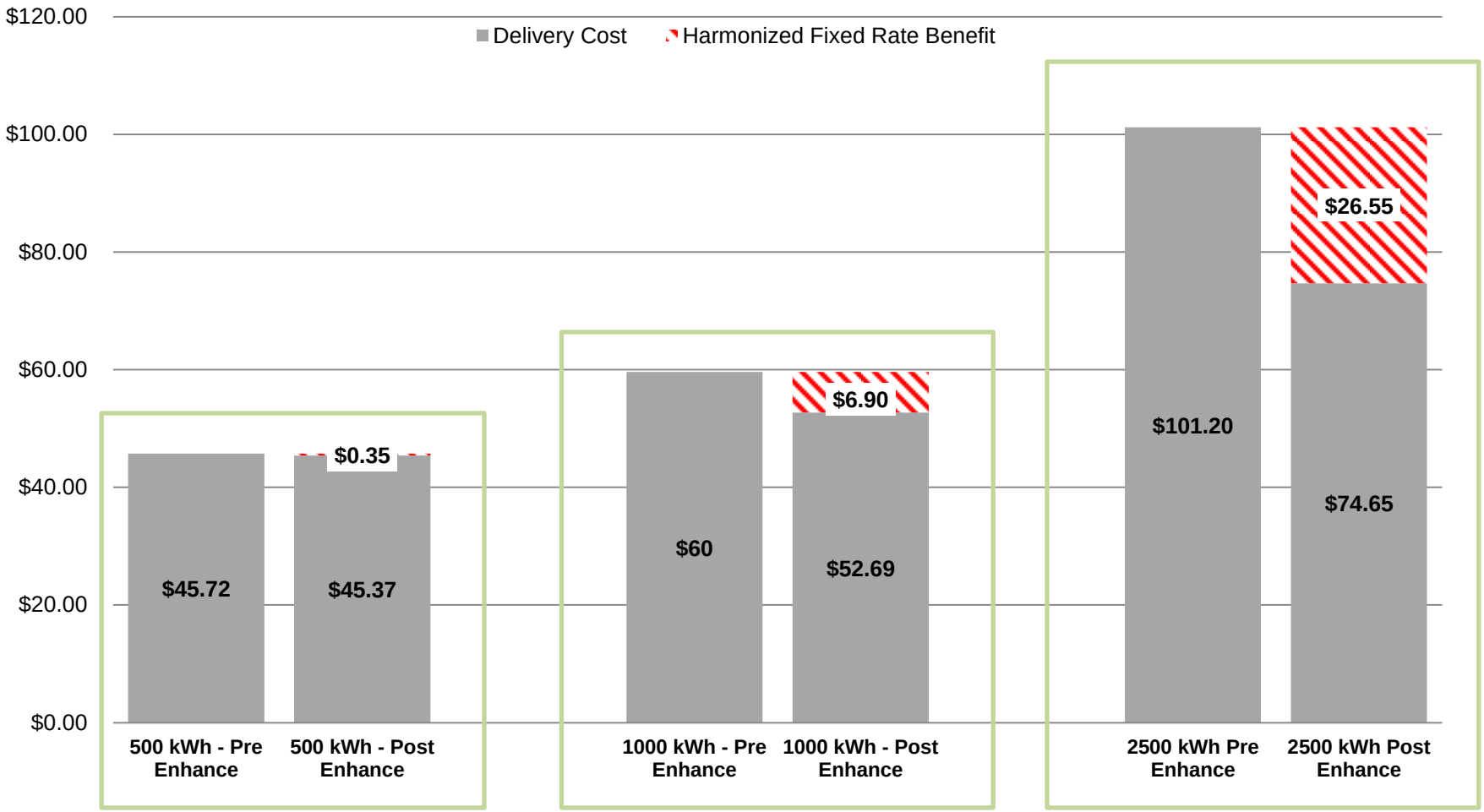
A. Harmonized Distribution Cost – Delivery Line Impact (Chapleau PUC)



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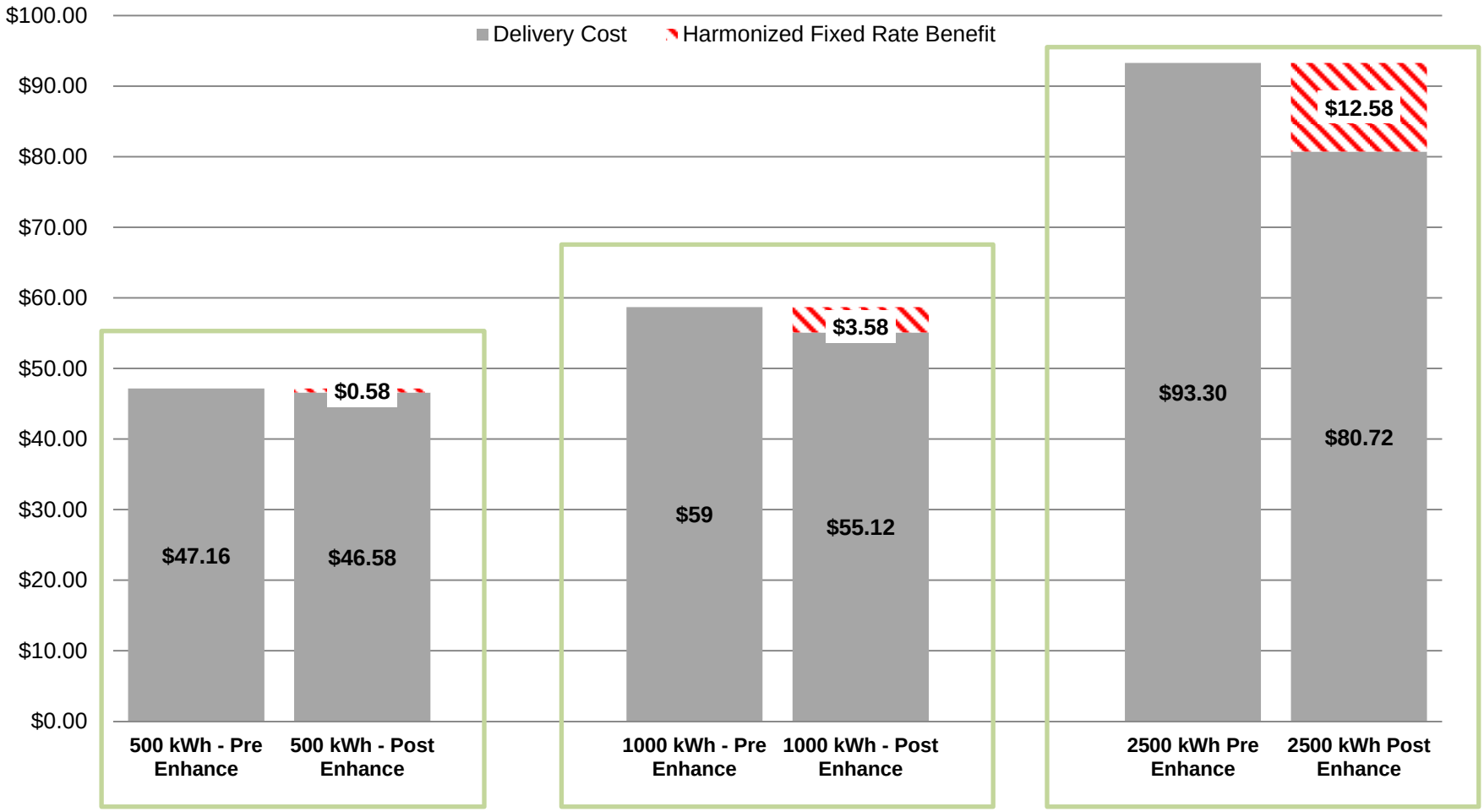
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Sioux Lookout Hydro)



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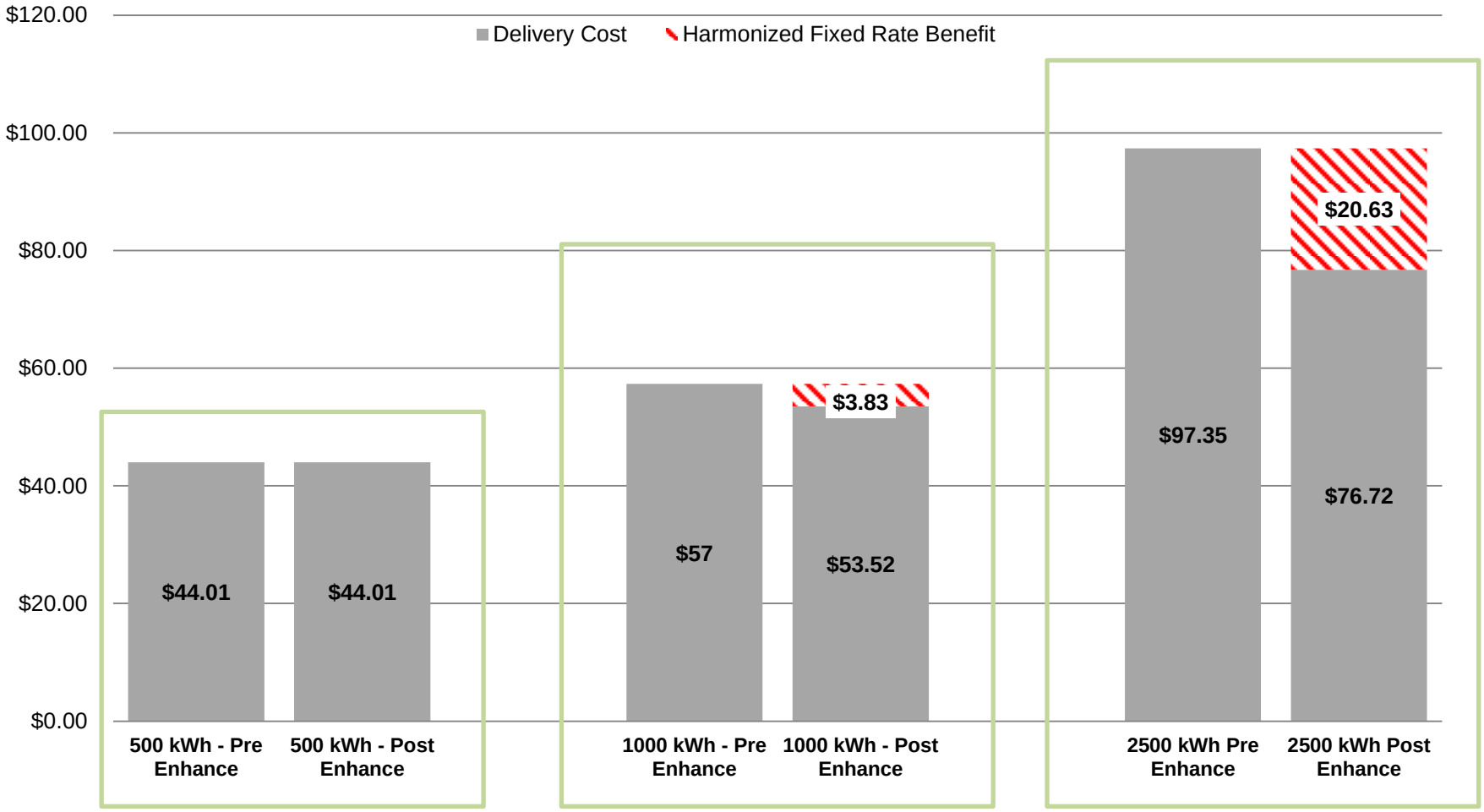
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Lakeland Power – Parry Sound)



Note: *Rates are for 2017 (either approved or proposed). Rates are for the Parry Sound territory within Lakeland Power. Other Lakeland Power customers (Huntsville area) not impacted.*

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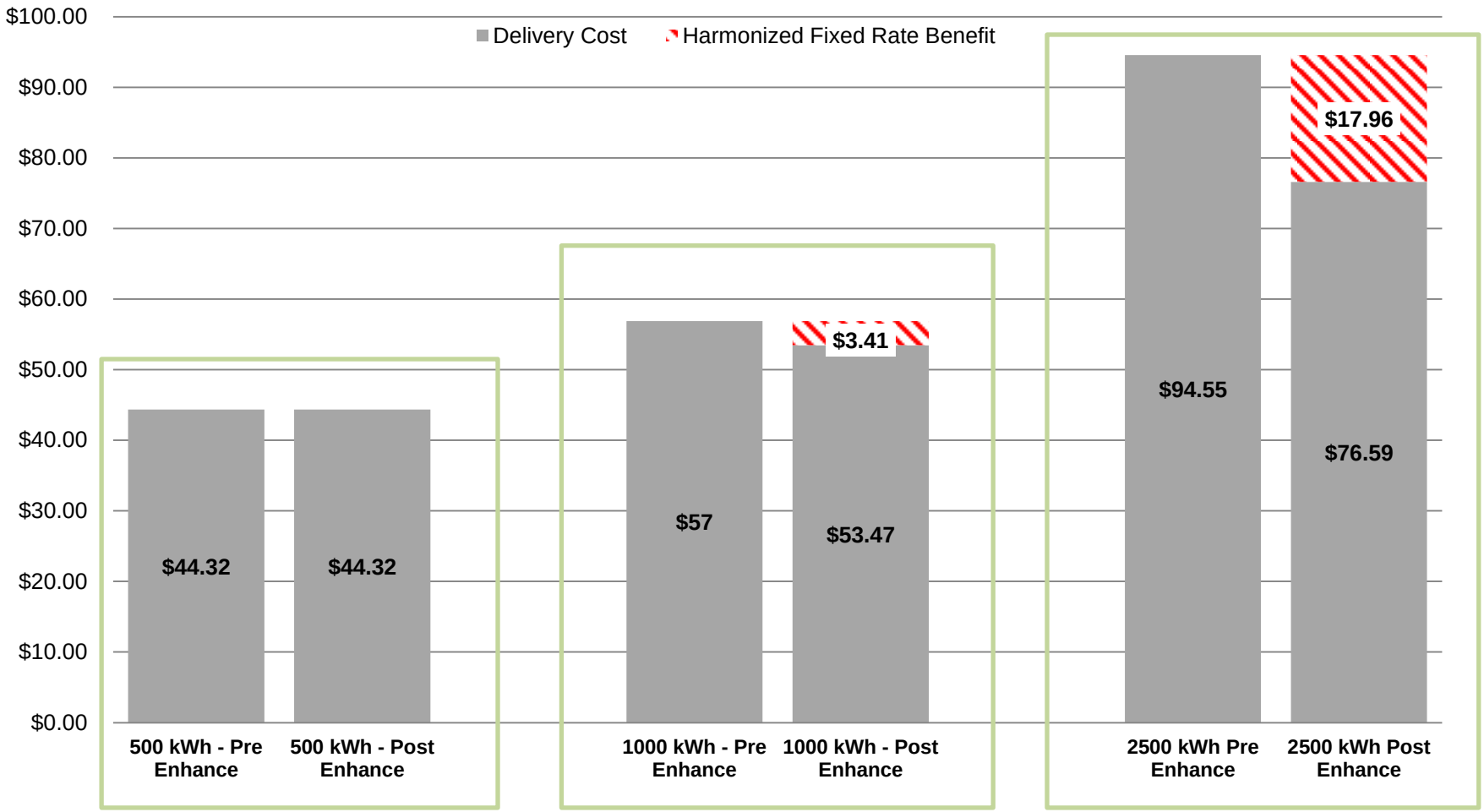
A. Harmonized Distribution Cost – Delivery Line Impact (Northern Ontario Wires Inc.)



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Note: *Rates are for 2017 (either approved or proposed)*

A. RRRP Enhancement – Considerations

Implementation

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
  - LDCs may need to be named explicitly in the legislation/regulation
  - A mechanism would also need to be created to ensure the level of benefit changes year to year
- LDCs will need to change their billing and customer information systems. OEB estimates that the implementation would take at least 6 months or more, following finalized regulations
- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis
  - Some options may impact OEB rate-setting processes and create disincentives towards Hydro One productivity and performance improvements.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.
- A mechanism will need to be created to ensure that LDCs/OEB/IESO/Province are aligned in the year-to-year forecasting and costing of the RRRP program and the enhancements.

A. RRRP Enhancement – Considerations (cont'd)

Fiscal

- As distribution costs vary year to year, forecasting fiscal impacts are challenging:
  - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate which could have a significant impact on fiscal requirements and ratepayer impacts.
  - The other high distribution cost LDCs generally have lower distribution cost increases, however, it is difficult to forecast fiscally the impact of the program until LDCs submit their cost of service applications to the Ontario Energy Board.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
TOTAL	**-**	**454**	**450**	**446**	**444**

Note: Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

B. Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application based program that lowers electricity costs of the most vulnerable consumers by a rebate directly on bills. The OESP is currently funded by the rate base.
- OESP benefits vary by income level and family size, and there are two benefit scales that include:
  - The basic program credit ranges from $30/month to $50/month.
  - An enhanced credit that ranges from $45/month to $75/month for consumers that are either Indigenous, use electric heat or have certain medical devices.
- The OESP launched on January 1, 2016, and in just over a year:
  - Almost 180,000 have been enrolled in the program representing 30% of the total targeted low-income population and some 278,000 applications have been received.
  - Almost $50 million in benefits have been provided to vulnerable consumers.
  - Some 172 intake agencies have been mobilized to assist low income consumers to apply for the OESP.
- To drive this uptake, the OEB has engaged in extensive outreach, including advertising in multiple languages, and continuing to work with partner agencies to develop a model for “application clinics” across the province to increase program awareness and uptake across the province.

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B. Ontario Electricity Support Program (OESP) (cont'd)

- There are a numbers of ways that the OESP program can be enhanced, including:
  - Working to get the OESP participation as close as possible to 100%:
    - Streamlining the application process to make it easier / quicker to get through (e.g., an alternative to the requirement to mail-in signed consent forms);
    - Putting in place a more aggressive communications strategy to make sure vulnerable communities are aware of the program; and
    - Exploring automatic OESP qualification for those who receive provincial programs (e.g., OW, ODSP).
  - Increasing the existing benefit scales by an additional 50% and expanding who benefits are provided to (see the following slide for details on what this enhancement would do).
- It is also recommended that the OESP be enhanced and also supported from the tax-base as part of the rate mitigation package.

B. Ontario Electricity Support Program (OESP) (cont'd)

- The tables below outline the existing OESP benefit scales and how the scales would be enhanced if increased by 50% and benefits are extended to additional groups (represented in the circled boxes):

Existing OESP Benefit Scales

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$30	$30	$34	$38	$42	$50	$50
	$28,001 - $39,000	-	-	$30	$34	$38	$42	$50
	$39,001 - $48,000	-	-	-	-	$30	$34	$38
	$48,001 - $52,000	-	-	-	-	-	-	$30

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$50	$55	$60	$75	$75
	$28,001 - $39,000	-	-	$45	$50	$55	$60	$75
	$39,001 - $48,000	-	-	-	-	$45	$50	$55
	$48,001 - $52,000	-	-	-	-	-	-	$45

Proposed +50% OESP Benefit Increase*

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$51	$57	$63	$75	$75
	$28,001 - $39,000	-	$40	$45	$51	$57	$63	$75
	$39,001 - $48,000	-	-	$35	$40	$45	$51	$57
	$48,001 - $52,000	-	-	-	-	$35	$40	$45

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$68	$68	$75	$83	$90	$113	$113
	$28,001 - $39,000	-	$60	$68	$75	$83	$90	$113
	$39,001 - $48,000	-	-	$52	$60	$68	$75	$83
	$48,001 - $52,000	-	-	-	-	$52	$60	$68

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***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

B. Ontario Electricity Support Program (OESP) – Considerations

Fiscal Impact

- Changes to legislation / regulation may be required to establish and define the parameters for OESP to receive funding from the tax-bas. The scope of changes would depend on the implementation / delivery mechanisms.
- Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.
- If OESP amounts are increased, it will need to be confirmed that the credit is not treated as taxable income. This was addressed in the current iteration of the OESP.
- Adding additional categories to the OESP matrix require will take time to implement as it will require changes to the central system as well as LDCs' billing systems. As well, the matrix will no longer follow the Low Income Measure (LIM), which could put additional pressure on the OESP and other provincial programs.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be).	-	178	239	290	334

C. Establishing a New LDC Affordability Fund

- For eligible low-income customers, the Home Assistance Program (HAP), delivered by LDCs under the Conservation First Framework, provides efficiency upgrades and education, at no cost, to help improve the energy efficiency and comfort of their homes and help customers manage their electricity bills.

- HAP does not address the needs of those customers that do not qualify as "low-income" but could benefit from conservation programs.
  - At the end of 2015, there were over 560,000***** residential electricity accounts in arrears; of these about 19,900****** (~3.6%) accounts were eligible to participate in low-income conservation and support programs.
  - According to the Ontario Energy Board (OEB), in 2015 about 60,000 customers had their electricity service disconnected.

Proposal: Establish Affordability Fund to Provide Existing Low-Income Conservation Program to Other Electricity Customers

- The Ministry proposes establishing an Affordability Fund which would be available to LDCs to provide similar energy efficiency measures as provided under HAP to targeted customers.
- The Affordability Fund would not be used to provide grants or financial assistance to customers to forgive all or a portion of their arrears or electricity bill.

*** Note:** Unverified numbers reported by LDCs to the OEB
**** Note:** Low-income customers identified through participation in LEAP

C. Establishing a New LDC Affordability Fund (cont'd)

Fund Details:

- An Affordability Fund would be accessible to LDCs only, and would target those customers who are most in need, such as those who are facing disconnection and who cannot qualify for the low-income programs.
  - By providing support for energy efficiency improvements, the Fund could help these customers reduce their future bills and avoid future disconnections.
  - The Fund would provide LDCs with an additional tool to provide assistance to their customers.

Eligibility Criteria/Fund Principles:

- Determination of eligibility could involve a number of factors and metrics:
  - Do not meet the definition of "low-income";
  - May have triggered action by an LDC collection department (e.g., are in arrears, have been placed on one or more payment plans, are due to be disconnected, etc.);
  - Priority could be given to eligible customers in electrically-heated homes, or other unique circumstances; and
  - Require financial assistance to pay for energy efficiency measures.

C. Establishing a New LDC Affordability Fund (cont'd)

Implementation

- ENERGY is currently in discussions with several large LDCs to determine the feasibility of establishing a Fund and to identify a willing LDC(s) to administer the funds.
  - LDCs have over 10 years of experience in delivering conservation programs, including experience specific to contracting for programs that target low-income customers.
  - LDCs are best positioned to identify and target their customers who are most in need.

- Given the scope of the Fund, an LDC would need a firm financial commitment up front before implementation. LDCs rely on rate-payer funding for most of their activities. The Affordability Fund would be a unique venture from an LDC perspective given that it is tax funded.

- LDCs would apply for funding to the Fund administrator, to offer energy efficiency measures to those customers that meet the targeted eligibility criteria.
  - Recipients could receive measures ranging from $3,000 to $5,000 per customer, at no or minimal cost. For example, measures available in the Home Assistance Program include:
    - Energy-saving light bulbs (LEDs); power bars; energy efficient window ACs, refrigerators, freezers, dehumidifiers; low-flow showerheads, hot water blankets, pipe wrap and faucet aerators (in homes with electric water heating); and
    - Programmable thermostats, weather stripping, insulation (in homes with electric heating).
  - Consideration could also be given to including cold climate air source heat pumps for electrically heated homes, which can range in cost from $7,000 to $13,000.
  - As an illustration, with $200 million, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

C. Establishing a New LDC Affordability Fund – Considerations

Considerations

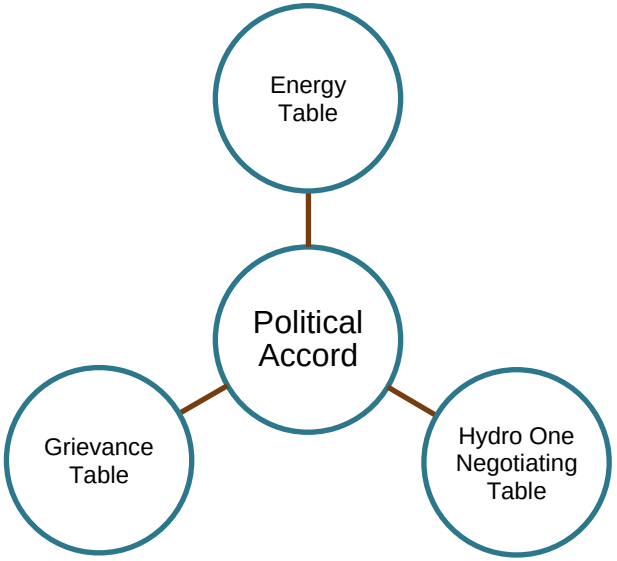
- The LDC Affordability Fund addresses a real need.
  - LDCs have expressed the need for an additional tool to provide assistance to their customers.
- Determining allocation of funds to LDCs:
  - Some LDCs may have a disproportionate number of customers in need of assistance; and
  - ENERGY is proposing to establish a Working Group, including the OEB, LDCs and potentially low income organizations to help develop funding criteria and allocation.
- LDCs need flexibility to target customers:
  - Not all customers who are in need will actively seek help;
  - Some customers in arrears may be "gaming the system" and not truly in need; and
  - LDCs recommend targeted outreach as opposed to broad marketing; a high volume of applications would limit the ability to deliver assistance to customers who need it most.

Fiscal Impact

- The LDC Affordability Fund would represent a fiscal impact of $200 million in fiscal year (FY) 2016/17.
- To allow for funds to flow in FY 2016/17, ENERGY would sign a Transfer Payment Agreement (TPA) with one or several LDCs to administer the Fund and transfer money before end of fiscal year.
- There is a fiscal risk if monies used for the Fund do not flow before FY year-end 2016/17 and for monies that are sitting in Hydro One at year-end (because of consolidation with province), and a corresponding fiscal pressure in the following years when the funds are flowed from Hydro One (H1) to ratepayers.

D. Implementing On-Reserve First Nations Delivery Credit

- ENERGY has a number of Tables with the Chiefs of Ontario (COO) and First Nations that include the Energy Table to discuss policy issues, the Hydro One Negotiating Table to discuss Hydro One shares, and the Grievance Table.
- The Grievance Table process was established at the request of COO as a means to avoid litigation to resolve historic grievances related to the energy sector and prevent these issues from impeding progress on broadening the ownership of Hydro One (H1).
- The cost of electricity and delivery charges were identified as the prevailing grievance at the First Nations-Ontario Energy Table meeting in Timmins in 2016, and the Minister of Energy agreed to explore options for a First Nations Rate through the Grievance Table process.



- In June 2016, following discussions on Hydro One shares and rates at COO's All Chiefs Conference, the Minister of Energy issued a letter directing the OEB to prepare a report providing "*advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers*".
  - OEB engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network. It also established an Advisory Committee with the Chiefs of Ontario's Grievance Committee.
- The Ontario Energy Board (OEB) has worked with COO to engage with First Nations to develop options for a First Nations electricity rate. The OEB provided a report to the Minister on December 29, 2016.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve. These challenges result in significantly higher electricity consumption levels and costs.
- First Nations living on reserve are particularly vulnerable low-income consumers: the average income is considerably lower compared to First Nations living off reserve and compared to non-Indigenous populations:
  - Average income of First Nations on reserve in Ontario: $21,100;
  - Average income of First Nations off reserve in Ontario: $31,527;
  - Average income of Non-Indigenous people in Ontario: $42,506; and
  - Median incomes on smaller reserves can fall below $10,000 (e.g., Cat Lake FN).
- Employment rates also differ between on-reserve First Nations, off-reserve First Nations and Non-Indigenous individuals, as well as other indices of social vulnerability:
  - 54% of Indigenous people over 15 years old and living on-reserve in Ontario are unemployed or not in the labour force;
  - The on-reserve unemployment rate is 18.3% compared to 6.4% in Ontario generally; and
  - 67% of families residing on-reserve are single parent families, compared to the Canadian equivalent of 19%.
- First Nations are seeking redress for historic grievances related to lands affected by energy developments, such as transmission or distribution infrastructure built on reserve lands and traditional territories where, in some cases, they may not have been appropriately consulted.
- Further, in some circumstances, linear infrastructure corridors cut First Nation reserves in half, significantly disturbing the use and management of an already small land base; the First Nation communities disturbed by the energy infrastructure report having experienced long wait times (e.g., 20 years) for their communities to get connected and receive the benefits of the energy derived from the local infrastructure.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
  - Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate;
    - The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of $13 to $20 million or 11 cents a month for a typical residential electricity consumer.
  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
  - Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.

- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.

- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

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  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
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- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.
- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

Distributor	Number of On-Reserve Residential Customers
Algoma Power Inc.	473
Attawapiskat Power Corporation	336
Bluewater Power Distribution Corporation	237
Cat Lake Power Utility Ltd.	80
Cornwall Electric Distribution	514
Hydro One Networks Inc.	16,679
Hydro One Remote Communities Inc.	2,579
PUC Distribution Inc. (Sault Ste. Marie)	264
Thunder Bay Hydro Electricity Distribution	332
Total Number of Customers	**21,494**

Source: OEB Report to Minister: Options for an Appropriate Rate Assistance Program for On-Reserve First Nations Electricity Consumers (Page 5).

D. Implementing On-Reserve First Nations Delivery Credit – Considerations

- Legislative and regulatory will be required to implement this program.
- The OEB will need to work with the LDCs to identify on-reserve consumers to administer the delivery rebate.
- Development of a communications plan containing the following elements:
  - Public release of the OEB report;
  - Commitment to working with LDCs on implementation details; and
  - Advanced notice to the OEB and COO regarding the ministry's decision to move forward on the OEB's recommendation and indicate a willingness to work collaboratively with COO on ways in improve community-LDC communication to ease implementation.
- The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- Recipients would continue to be eligible for programs such as the Ontario Electricity Support Program (OESP) and the Low-Income Electricity Assistance Program (LEAP).
- There is a risk that either non-status Indigenous communities without reserves or Métis could challenge the program on the grounds that it discriminates against them contrary to section 15 of the Charter. This risk is mitigated by the ameliorative purpose of the program and because targeting First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities. A genuinely ameliorative program that targets some people but excludes others is shielded from a s. 15 challenge if it serves or advances the ameliorative goal.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
On-Reserve First Nation Delivery Credit	-	20	20	20	20

Fiscal Roll-Up

Fiscal Impact ($M)*	16-17	17-18	18-19	19-20	20-21
RRRP Enhancements**	-	454	450	446	444
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be)	-	178	239	290	334
On-Reserve First Nation Delivery Credit	-	20	20	20	20
LDC Affordability Fund***	200	-	-	-	-
Total	200	652	709	756	798

***Note:** GA Smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met. See GA Smoothing – Fiscal Considerations for fiscal impact of GA smoothing if legal and accounting treatment not met.

****Note: Note:** Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

*****Note:** Funding for the LDC Affordability Fund is one-time in 2016/17.

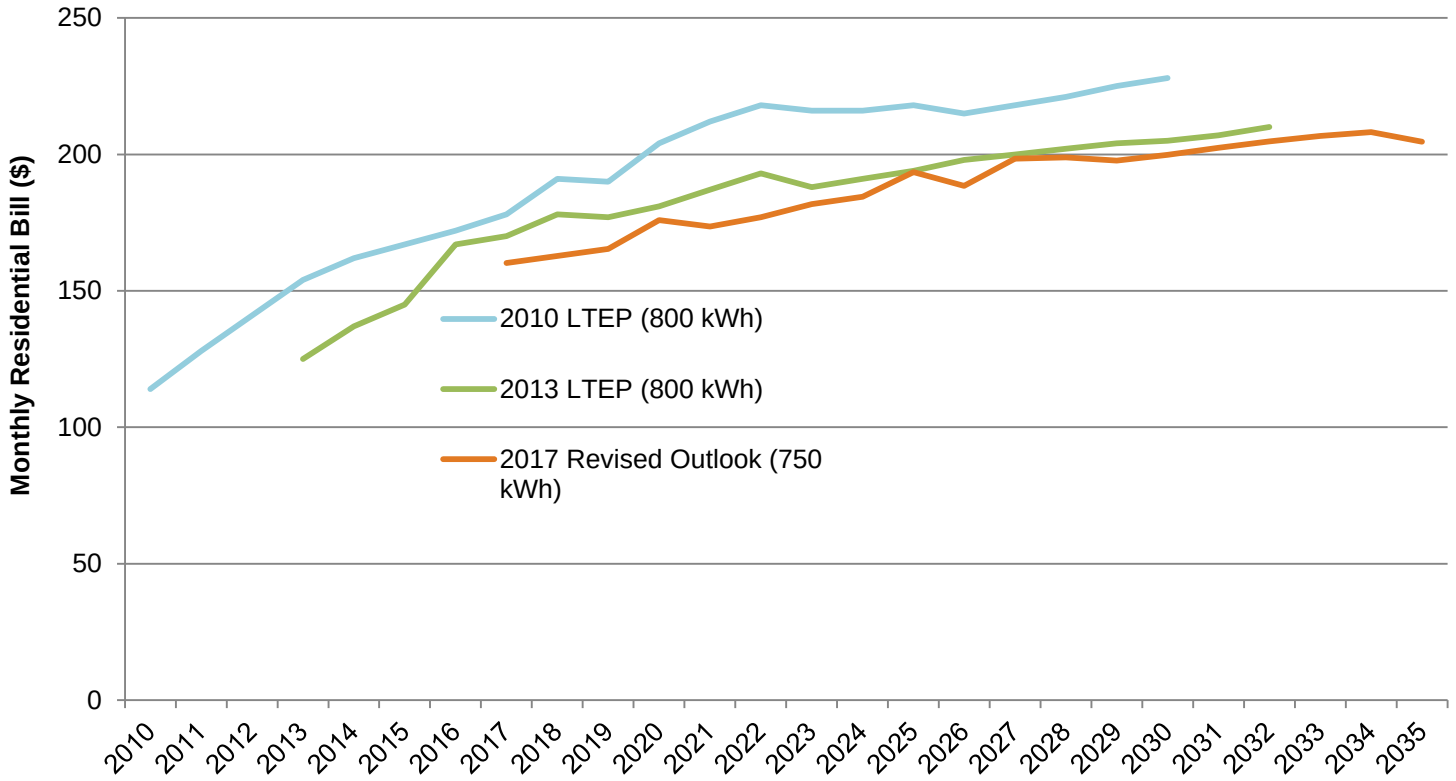
BENDING THE FUTURE COST CURVE OF ELECTRICITY

Existing Rate Mitigation Actions To Bend The Cost Curve

- Since 2013, the government has taken a number of actions to reduce electricity ratepayer costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.
  - Suspending the second round of the LRP process and the Energy-from-Waste Standard Offer Program, which is expected to save up to $3.8 billion in costs.

Existing Rate Mitigation Actions To Bend The Cost Curve (cont'd)

- The chart below shows how electricity rate forecasts have trended down over time.



Sources: *2010 LTEP (800 kWh/month); 2013 LTEP (800 kWh/month); Revised Ontario Planning Outlook (750 kWh/month as of December 2016) which includes: ICI expansion, RRRP update, 8% rebate, HQ agreement, suspension of LRP II and EFWSOP.*

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A. OEB – LDC Efficiencies and Rates

Leveraging the OEB

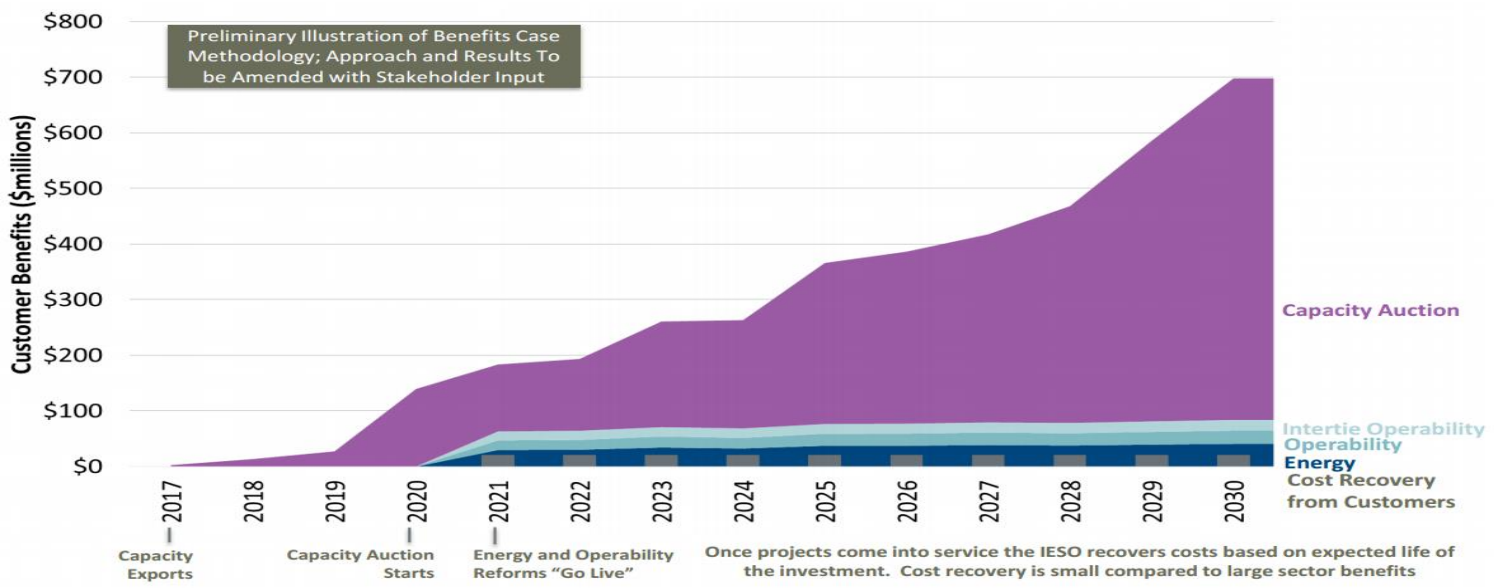
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- The OEB, through the Renewed Regulatory Framework for Energy (RRFE), has since 2012 attempted to move the distribution sector towards a performance/outcomes-based regulatory framework.
  - While new reporting requirements such as the LDC performance scorecard are positive developments, RRFE does not tie these system performance expectations to LDC financial performance.
- Encouraging shared partnerships on services between utilities will help reduce costs in the back end and encourage further innovation for small to medium sized utilities.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to make recommendations about how the distribution sector could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities.

Opportunities

- ENERGY could help promote and accelerate these efforts by asking the OEB to look at opportunities to further drive LDC efficiencies and productivity. This may indirectly incent LDC consolidation.
- In parallel, the OEB could be instructed to review business cases behind its own regulatory requirements to reduce “red tape” and eliminate costs that LDCs indicate are creating pressures on operating expenses.
- This could be done through the Minister's letter, the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes.

B. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.



GLOBAL ADJUSTMENT (GA) SMOOTHING

Overview – GA Smoothing

- The Global Adjustment (GA) has risen over the past decade as the province's electricity system has decarbonized.
  - The vast majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing, and fixed operations costs. The GA recovers these fixed costs of running the province's generation fleet, as well as the cost of conservation programs.
- The majority of the province's electricity generators are under 20-year contracts and account for less than half of the GA. Some of these generators will continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years).
  - There is an opportunity to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs.
  - GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief (i.e., similar to re-financing a mortgage). By recognizing that generation assets are expected to continue to provide residual benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.
- The GA Smoothing options under consideration are illustrative and show potential rate mitigation measures to meet a targeted 25%, 20% and 18% reduction from the projected residential bill in 2017.
  - These residential impacts are based on a forecast for a household connected to Toronto Hydro that consumes 750 kWh per month.
  - Actual ratepayer savings would vary due to differences in consumption patterns.
  - Targeted to residential and small business customers (RPP).

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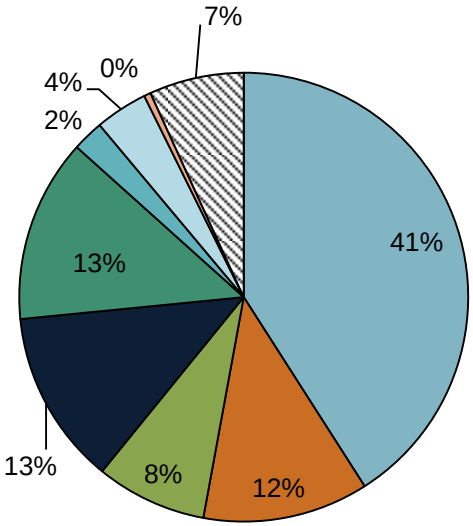
GA Smoothing – Cost Breakout

- The Global Adjustment (GA) accounts for the fixed costs, including capital costs, of running Ontario's generation fleet, as well as the cost of conservation programs. The GA is instrumental in maintaining a reliable electricity system by ensuring that sufficient generating capacity is available.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing and fixed operations costs. Most generators are on 20-year contracts with the exception of hydroelectric and nuclear plants. They operate on longer contracts (or are regulated on a cost-of-service basis by the OEB) in recognition of the much longer operating lives of these facilities.
- Chart below shows the breakout of the GA by generator and program types. In 2016, the GA costs were $12.3 billion. These costs will evolve over time as 2,181 MW of previously contracted generation comes online in the coming years.

2016 GA Cost: $12.3 billion



	GA ($M)
Nuclear	5,053
Hydro	1,473
Natural Gas	985
Wind	1,552
Solar	1,630
Biomass, Landfill and Byproduct	278
Conservation	467
IEI Program	60
OEFC*	842

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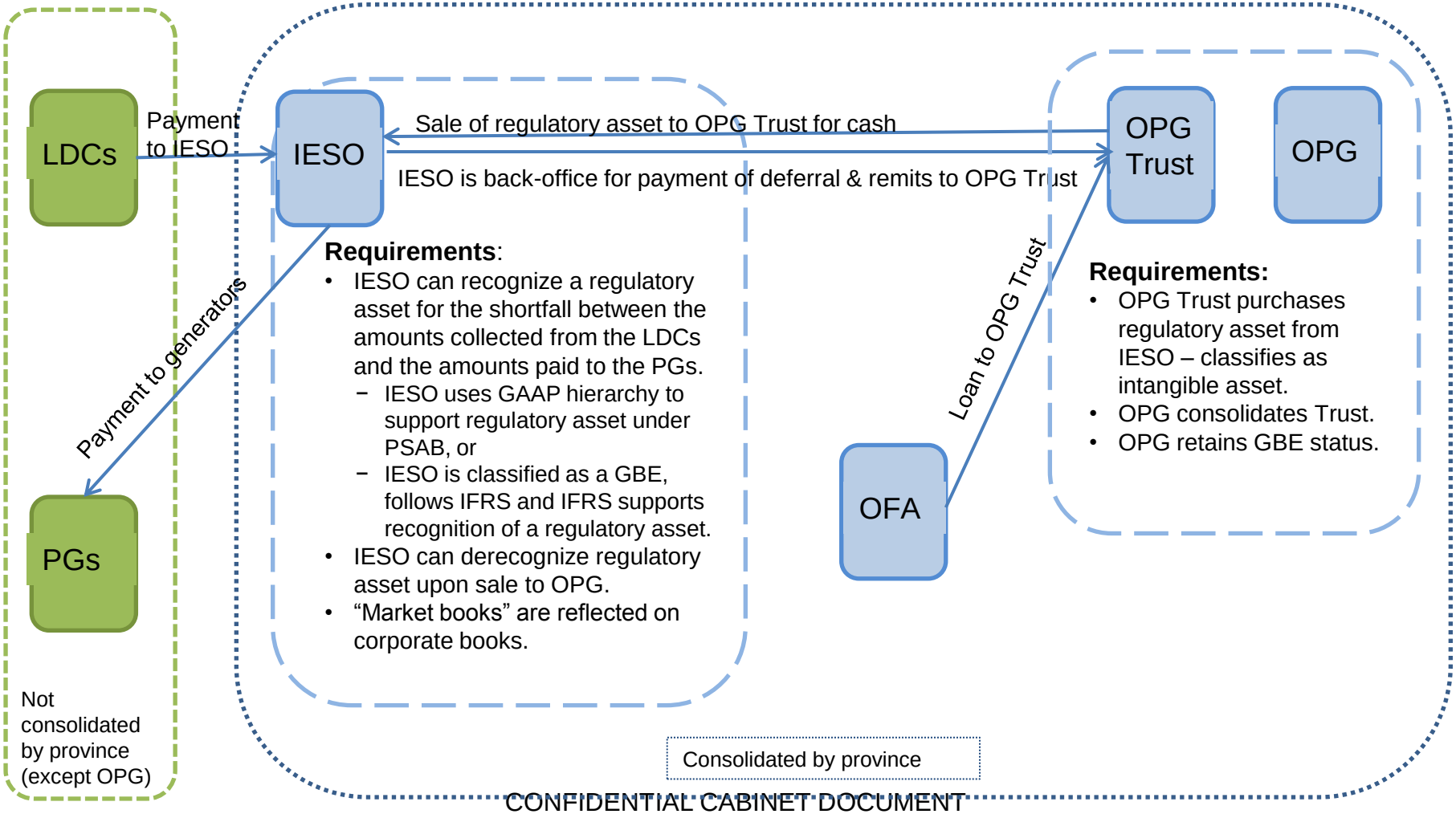
***Note:** OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.

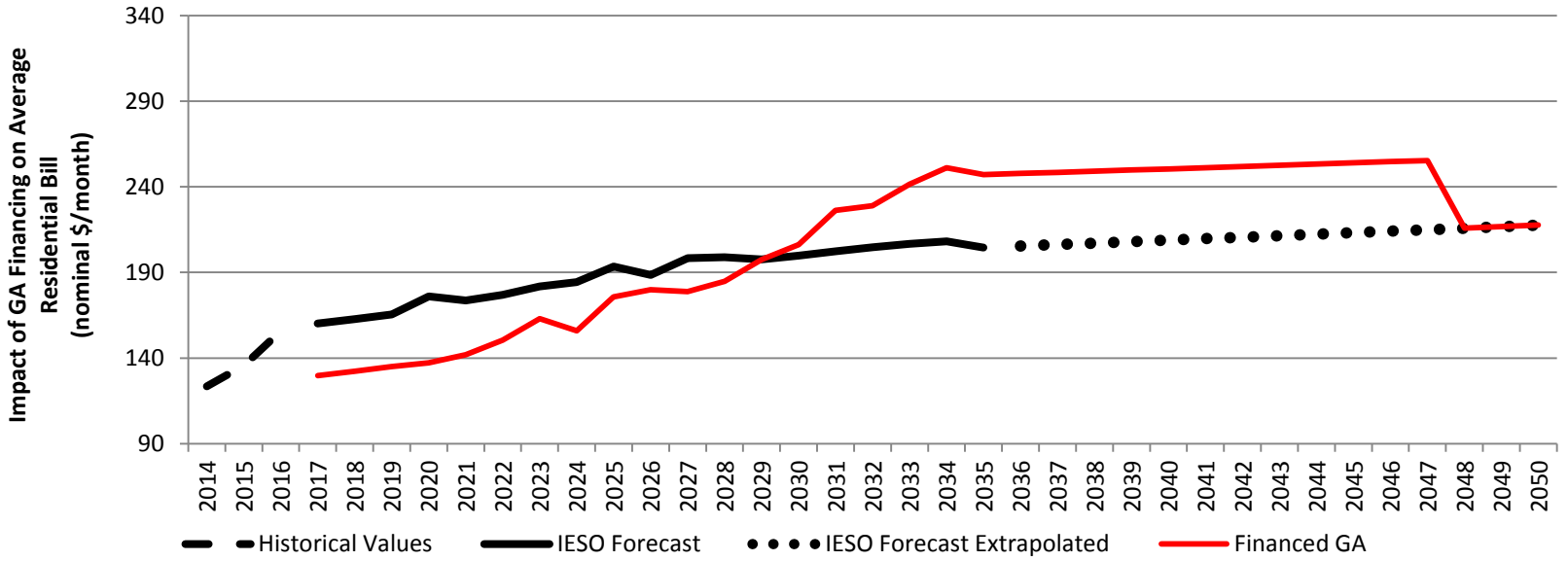
**** Note:** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

A. GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



B. Option 1: GA Smoothing for RPP Only (Borrow $2.2 billion in 2017, Residential Bills Lowered 25%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-27.0	-26.9	-26.9	-34.3	-28.1	-23.5	-16.6	-25.2	-15.7	-7.5	-17.4	-12.4	-0.1	5.7	21.1	21.4	30.7	38.1	37.6	37.5	37.3	37.2	37.0	36.8	36.7	36.5	36.4	36.2	36.1	35.9	35.8	0.0
Total Accumulated Debt *($ billion)*	2.2	4.6	7.0	10.2	13.1	15.7	17.8	20.8	23.2	25.0	27.7	30.1	31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6	24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8	6.0	3.1	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.2	2.3	2.4	3.2	2.8	2.6	2.2	3.0	2.4	1.8	2.7	2.4	1.6	1.1	-0.1	-0.1	-0.9	-1.6	-1.7	-1.8	-1.9	-2.0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.1	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.2 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 1: GA Smoothing for RPP Only – Residential Bills Lowered 25% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

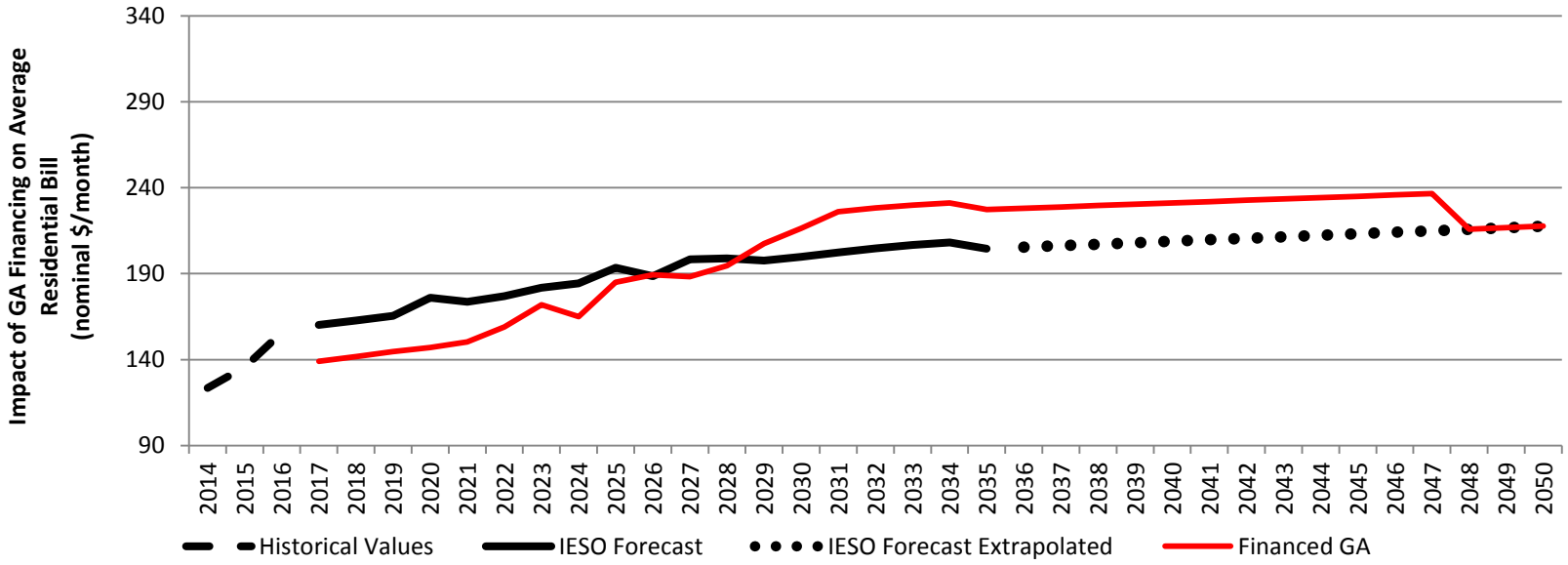
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-27	-27	-27	-34	-29
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		123	126	128	131	133
8% rebate		-10	-10	-10	-10	-11
HST		16	16	17	17	17
Revised Bill (includes HST)	**163**	**129**	**132**	**135**	**137**	**140**
Year-over-Year Change		-21%	2%	2%	2%	2%
Change from Forecast		**-25%**	**-25%**	**-24%**	**-28%**	**-25%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.5	-15.8	-8.8	-17.2	-7.5	0.9	-8.9	-3.7	8.7	14.7	20.9	20.7	20.6	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.7	19.6	19.5	19.4	19.3	19.3	19.2	0.0
Total Accumulated Debt *($ billion)*	1.6	3.2	4.9	7.2	9.3	11.0	12.3	14.4	15.7	16.5	18.0	19.3	19.5	19.3	18.6	17.8	17.0	16.1	15.2	14.3	13.3	12.2	11.1	10.0	8.7	7.5	6.1	4.7	3.2	1.6	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	1.6	1.6	1.7	2.4	2.1	1.8	1.3	2.0	1.4	0.7	1.6	1.2	0.3	-0.2	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-1.6	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $1.7 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

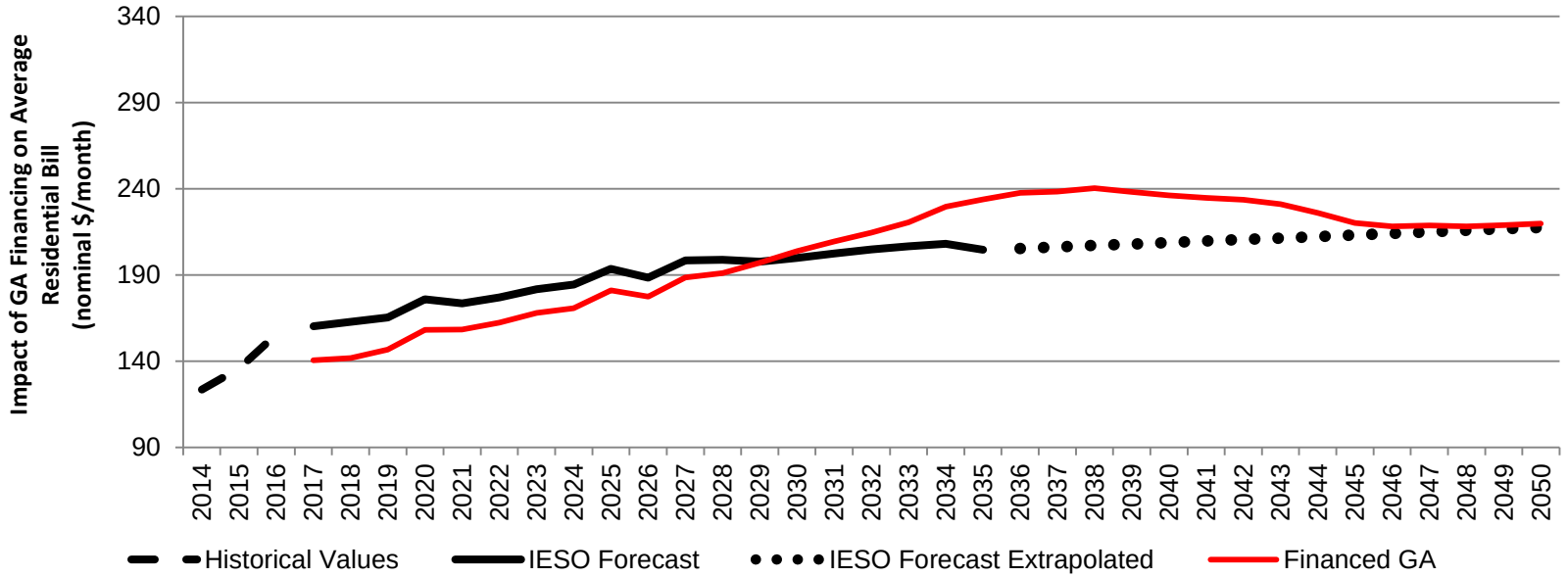
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 3: GA Smoothing for RPP Only (Borrow $1.4 billion in 2017, Residential Bills Lowered 18%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-17.5	-18.5	-16.6	-15.7	-13.5	-12.9	-12.2	-12.2	-11.0	-9.7	-8.8	-6.9	-0.6	3.4	6.2	8.6	12.2	19.0	25.8	28.4	28.4	29.5	26.8	24.2	22.2	20.4	17.3	12.2	6.2	3.7	3.3	2.0
Total Accumulated Debt *($ billion)*	1.4	3.1	4.6	6.1	7.5	9.0	10.4	12.0	13.5	15.0	16.5	17.9	18.8	19.5	20.0	20.3	20.3	19.8	18.5	17.0	15.5	13.7	12.1	10.6	9.1	7.8	6.7	5.9	5.7	5.6	5.6	5.7
Total Change in Accumulated Debt *($ billion)*	1.4	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.0	0.7	0.5	0.3	0.0	-0.6	-1.2	-1.5	-1.6	-1.8	-1.6	-1.5	-1.4	-1.3	-1.1	-0.7	-0.3	-0.0	-0.0	0.1

Notes: Assumes financing of all non-nuclear IESO contracts for an additional 10 years beyond the life of each contract and 15 year financing of the conservation cost in any given year. Assumes a a nominal interest rate of 5% (compounded monthly). IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

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B. Option 3: GA Smoothing for RPP Only – Residential Bills Lowered 18% (with Tax-Base Funded 8% Rebate and Social Programs)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-17	-18	-17	-16	-13
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		134	135	139	149	149
8% rebate		-11	-11	-11	-12	-12
HST		17	17	18	19	19
Revised Bill (includes HST)	**163**	**140**	**141**	**146**	**157**	**156**
Year-over-Year Change		-14%	1%	4%	7%	-1%
Change from Forecast		-18%	-19%	-18%	-17%	-17%

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

GA Smoothing – Accounting Considerations

- Analysis is not complete; several requirements (below) are high risk re: satisfactory resolution.
- Complexity of the structure, including the number of entities involved increases risk in and of itself.
- If all requirements can be met, an accounting analysis can be supported that results in: (1) no fiscal impact; and (2) no increase in net debt.
- IESO requirements – IESO mgmt, KPMG (Energy advisor and IESO auditor), OPCD and EY (OPCD advisor) are evaluating accounting risks:
  - IESO can recognize a regulatory asset for the shortfall between the amounts collected from the LDCs and the amounts paid to the PGs;
    - IESO uses GAAP hierarchy to support regulatory asset under PSAB; or
    - IESO is classified as a GBE, follows IFRS and IFRS supports recognition of a regulatory asset.
  - IESO can derecognize regulatory asset upon sale to OPG; and
  - "Market books" are reflected on corporate books.
- OPG requirements – OPG mgmt, PwC (OPG auditor), KPMG (Energy advisor), and OPCD are evaluating accounting risks:
  - OPG Trust purchases regulatory asset from IESO – classifies as intangible asset;
  - OPG consolidates Trust; and
  - OPG retains GBE status.
- No discussion with OAG; in previous Annual Reports, the OAG has raised concerns about the appropriateness of recognizing rate regulated assets and liabilities.

GA Smoothing – Legal Considerations

- The current GA amount paid by consumers is a regulatory charge. One of the requirements of a valid regulatory charge (as opposed to a tax) is that the person paying the charge either benefits from the regulatory scheme or causes the need for regulation.

- In principle, refinancing the GA to spread the costs of generation and conservation assets over the useful life of the assets presents only a low risk of being a tax, as each cohort of consumers pays for a proportion of the GA cost roughly equal to the proportion of the benefit they receive from the useful life of the assets.

- A proposal for refinancing the GA that appears to cross-subsidize near-term consumers at the expense of long-term consumers by back-loading costs more than if costs were spread equally over the estimated lifespan of generation and conservation assets presents a moderately high risk (more likely than not) of constituting a tax.

- Were the charge characterized as a tax, in the event of a challenge, it would be struck down by a court as unconstitutional and consumers would be entitled to recover their payments. This risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

GA Smoothing – Policy Considerations

- Borrowing money to smooth the Global Adjustment (GA), while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - In addition, should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- The impacts are also based on a GA forecast. Since the GA fluctuates, actuals will vary based on demand, the addition of new generation and natural gas prices.
  - A "true-up" mechanism will be required to account for the difference between the "estimate" and "actual" GA costs.

- If Class B electricity consumers, such as commercial and small industries, do not receive the benefit of GA Smoothing (i.e., because it is only targeted to RPP consumers) – consideration could be given to provide tax-based measures to off-set electricity costs (e.g., tax-credits, programs, etc).
  - Class B consumers have raised concerns about the cost of electricity and its impact on their business competitiveness.
  - Government is developing an option that would provide rate relief for Class B consumers.

- Given the legal framework the amount of GA smoothing needs to be proportionate to the generating contracts (i.e., 20-year) and the additional years of generation services still available (i.e., additional 10-years of service).

- Rating agencies and investors in the Province's debt may view this borrowing as an obligation of the Province, regardless of accounting treatment. Depending on the magnitude of the debt to be incurred could have an impact on the Province's borrowing cost.

GA Smoothing – Fiscal Considerations

- If the proposed legal and accounting treatment of the GA financing smoothing proposal is not implemented, there could be a negative impact on the province's fiscal plan, as shown below.

- The table below shows the projected fiscal savings /costs related to GA smoothing Options 1 and 2 under these two legal/accounting treatment scenarios

Fiscal Impact ($M)	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Without Proposed Legal/Accounting Treatment					
Option 1 - Bills Lowered by 25%, RPP Only*	2,266	2,372	2,633	3,096	2,775
Option 2 - Bills Lowered by 20%, RPP Only*	1,574	1,632	1,844	2,282	1,988
Option 3 - Bills Lowered by 18%, RRP Only*	1,487	1,585	1,524	1,503	1,429

*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

Source: Ministry of Energy

Legislative Authority – Considerations

1. Electricity Support Programs

- **RRRP, OESP and First Nations Rate:** Moving costs to the tax base and creating a First Nations rate will require amendments to OEBA. Regulatory amendments (442/01, 314/15, 275/04) will be required to address program details.

- **LDC Affordability Fund (2c):** In order to implement new LDC affordability fund the Province would need to enter into Transfer Payment Agreements with qualified third parties to administer the fund.

2. Bending the Future Cost Curve of Electricity

- No specific legislative or regulatory amendments identified. IESO may need to amend market rules. Agency MOUs/MOAs may require amendment.

3. GA Smoothing

- **Amendments to *Electricity Act, 1998* (EA) and *Ontario Energy Board Act, 1998* (OEBA)**
  - The EA allows the Lieutenant Governor in Council to cause an OPG Holdco to be created under the *Business Corporations Act.*
  - The mandate and governance of the Financing Subsidiary will be addressed through amendments to the EA. Governance provisions will be designed to address the accounting control indicators.
  - The Financing Subsidiary will require authority to recover principle, interest and administrative costs through GA from customers.
  - Legislation would authorize IESO to collect amounts on behalf of the Financing Subsidiary and settle accounts with the Financing Subsidiary as a service provider. Regulatory amendments to GA Regulations would require IESO to:
    - Separately settle and track amounts received from the Financing Subsidiary to lower GA (including maintaining variance accounts).
    - Separately settle and track amounts paid back to the Financing Subsidiary (including maintaining variance accounts).
    - Distributors would continue to collect from consumers and settle with IESO. Generators would continue to be paid by IESO.
  - OEBA-related amendments would allow for OEB oversight. Light touch would focus on the borrowing entity's recovery of administrative costs and its calculation of amounts owing in a period. Heavy touch would give OEB the discretion to determine repayment over time.
  - The certainty of the legislative mechanism to recover the debt and interest, and the extent of discretion of the OEB to alter either amount over time, will have impacts on the availability and cost of capital.
  - Further legal analysis is required as the GA option is developed.

Communication Plan

Objective:

- Demonstrate Ontario's commitment to lower electricity costs for ratepayers through new rate relief initiatives.

Strategic Approach

- High-profile Premier's announcement.
- News release, backgrounders, QA's are being prepared.
- A multimedia marketing and advertising campaign is being prepared on the topic of rate mitigation for electricity consumers.

From: Mike Manning
To: Gadi Mayman
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 3:40:03 PM

Hi Gadi:
Was there a deck you were going to email me?

Mike

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 10:02 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
Subject: FW: GA Financing Terms

Mike, I don't know how much you know about this, but maybe it's time to bring you up-to-speed if you're not aware of what the government is thinking of doing on electricity rate mitigation. I'd be happy to fill you in whenever it's convenient for you. Ken has been in the loop through the piece, as it's struck me from the beginning that this is far more of an accounting issue than a funding one.

Regards,
Gadi

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 9:59 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: GA Financing Terms

I agree that from a funding perspective the Province, through the OFA (actually the OEFC, but that's just a detail), would be able to accommodate this, so I think it definitely becomes an accounting question. I'm under the impression that OPCD has already been linked in on this, but it would make sense to make sure that they are.

Regards,
Gadi

From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, February 15, 2017 9:56 AM

To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: GA Financing Terms

Hi Gadi,

Energy was talking with OPG yesterday about GA Financing modelling. One of the simplifying assumptions in the model is the ability to build up interest without any payments for quite long periods of time (10 years +). This contributes to the debt build up, but allows for the large, early year rate reductions.

OPG is going to reality check this based on what it thinks a 3rd party lender would expect. At a high level, they have suggested that interest capitalization would be unrealistic beyond 1 year.

What do you think is realistic if OFA acts as lender? I assume the Province may have some more flexibility, but would require terms that meet the asset test for accounting purposes. Should we link in with OPCD as well on this question?

Thanks,
Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

From: Gadi Mayman
To: Ronald Kwan
Cc: Ken Kandeepan; Mike Manning; Lynsey Wynberg
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 1:30:00 PM

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From:	Gadi Mayman
To:	Mike Manning
Subject:	RE: GA Financing Terms
Date:	Wednesday, February 15, 2017 11:05:25 AM

That'd be great.

From: Mike Manning
Sent: Wednesday, February 15, 2017 11:05 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: RE: GA Financing Terms

Could come over now if that works.
Mike

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 11:02 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
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Date:	Wednesday, February 15, 2017 11:05:08 AM

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From: Gadi Mayman
To: Mike Manning
Cc: Lynsey Wynberg
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 11:01:35 AM
Attachments: Cabinet Submission - Electricity Price Mitigation_Feb15 FINAL.pdf

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Ontario

Electricity Price Mitigation

Ministry of Energy

February 15, 2017

Minister

Deputy Minister

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in transmission and local distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP)).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no new NUG contracting and demand response).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate – $11/month savings, updating Rural or Remote Rate Protection (RRRP) – $45/month savings, expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants and suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.

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

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

- On a number of occasions the Premier has indicated publicly that further relief on electricity prices will be provided to consumers in the near term.

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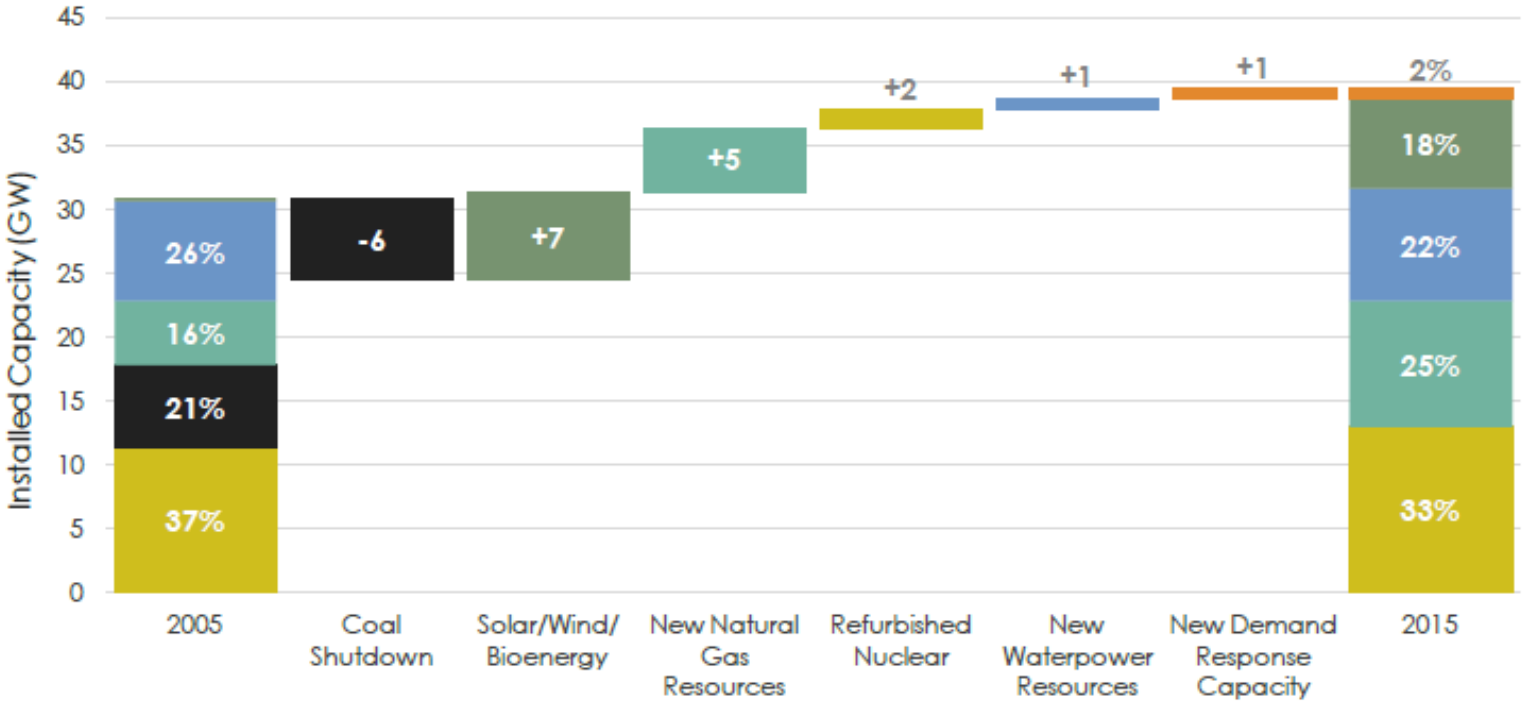
Context – Infrastructure Investments

- In the eleven year period between 2005 and 2015, government added new electrical capacity to Ontario's grid to restore reliability, replace coal and meet environmental objectives.



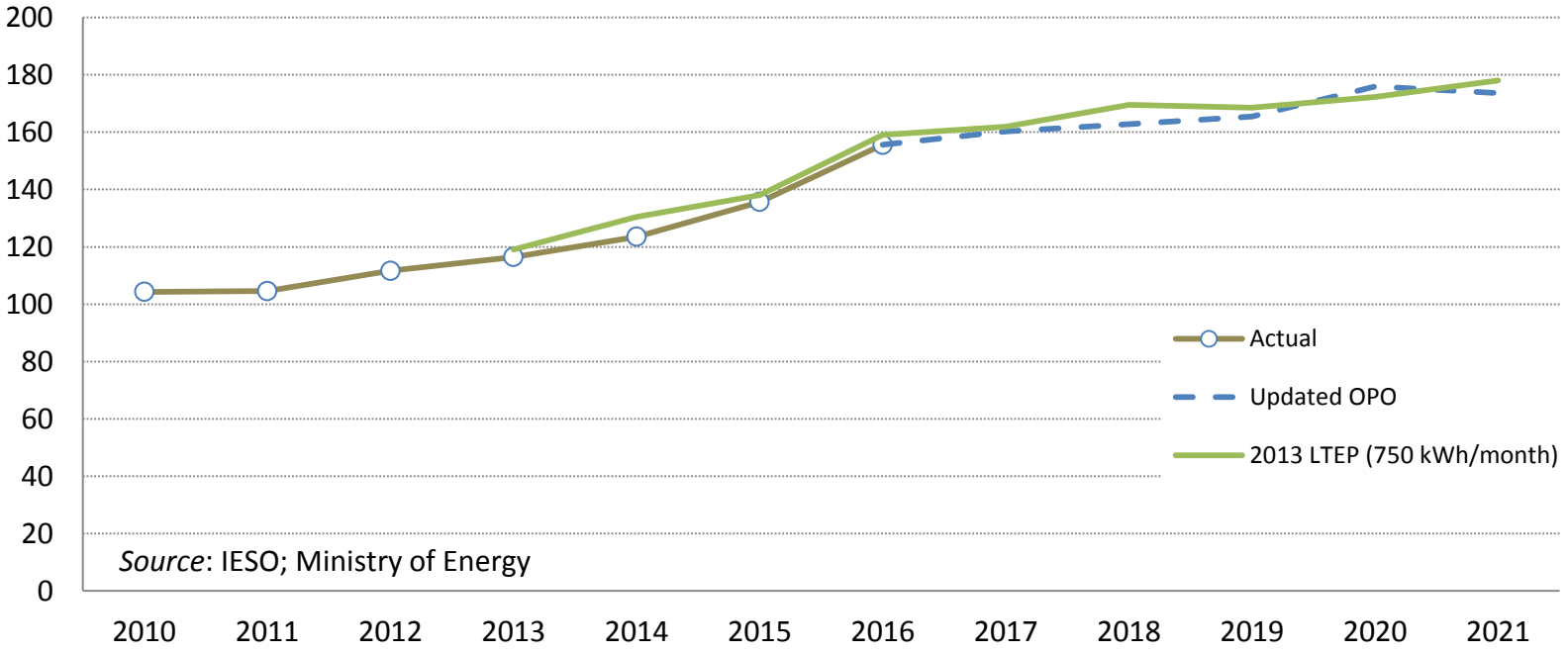
Source: IESO Ontario Planning Outlook

Context – Electricity Prices

- Electricity price increases have generally outpaced inflation. There have been several government policies that have impacted electricity prices over the past several years, including: HST, the Industrial Conservation Initiative, the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge (DRC).

Illustrative Typical Residential Electricity Bills

Historical and Forecast in $/month



Rate Mitigation Proposal

- Three approaches are proposed:

  1) Helping the most vulnerable by enhancing electricity support programs and shifting cost onto the tax-base:
     - Rural or Remote Electricity Rate Protection (RRRP) Enhancement (Delivery Charge Relief);
     - Ontario Electricity Support Program (OESP) Expansion;
     - LDC Affordability Fund; and
     - On-Reserve First Nations Delivery Credit.

  2) Ongoing activities to bend the future cost curve of electricity:
     - Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates; and
     - Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.

  3) Smoothing the global adjustment (GA) to provide significant and immediate rate relief through cost deferral of the GA:
     - Implementation Model; and
     - Smoothing Mechanism.

- The following slides provide additional information on the above initiatives.

ELECTRICITY SUPPORT PROGRAMS TO HELP THE MOST VULNERABLE

Electricity Support Programs to Help the Most Vulnerable

- To date, a number of electricity support programs are funded through the electricity rate-base. There is opportunity to provide support to a more targeted subset of customers who are disproportionately affected by increased electricity costs and to shift these costs to the tax base.

- These customers include:
  - **High Delivery Cost Customers:** Some customers in rural areas where the cost to delivery electricity is high can experience difficulty in reducing their electricity bill through conservation, particularly when reliant on electric heating.
  - **Low-Income Customers:** Rising electricity costs make up a disproportionally large amount of the household expenditures for low-income households.
  - **First Nation On-Reserve Customers:** On-Reserve First Nations customers experience challenges with energy affordability and are seeking to address historical grievances associated with electricity system infrastructure.

- To provide targeted assistance to the customers and alleviate electricity cost burden, ENERGY proposes to:

  a. **Enhance Rural or Remote Rate Protection** (RRRP) by funding its costs through the tax base and providing additional support to customers of designated Hydro One rate classes and other high distribution cost Local Distribution Companies (LDCs).

  b. **Enhance Ontario Electricity Support Program** (OESP) by funding its costs through the tax base and increasing eligible benefits by 50%.

  c. **Establish an LDC Affordability Fund**, providing energy efficiency measures at no or minimal cost to those struggling to pay electricity bills and are ineligible for low-income conservation or support programs.

  d. **Implementing On-Reserve First Nations Delivery Credit**, to remove Delivery charges for on-reserve First Nations customers.

A. Delivery and Distribution Charge – Background

- The **Delivery** line on a typical consumer bill is specific to a consumer's Local Distribution Company (LDCs) and accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.

SAMPLE MONTHLY BILL STATEMENT

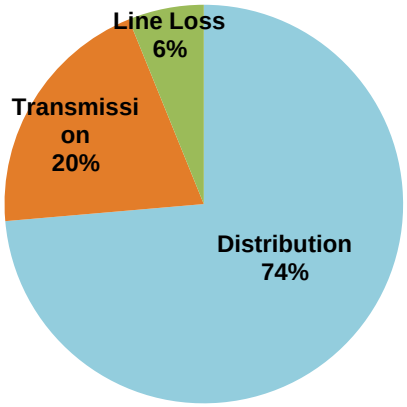
Anytown Hydro-Electric Limited

Account Number:
000 000 000 000 0000

Meter Number:
00000000

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

Cost breakdown of Delivery Line for an Average Residential Bill*



* Toronto Hydro Bill @ 750kWhs

A. Rural or Remote Rate Protection Program – Background

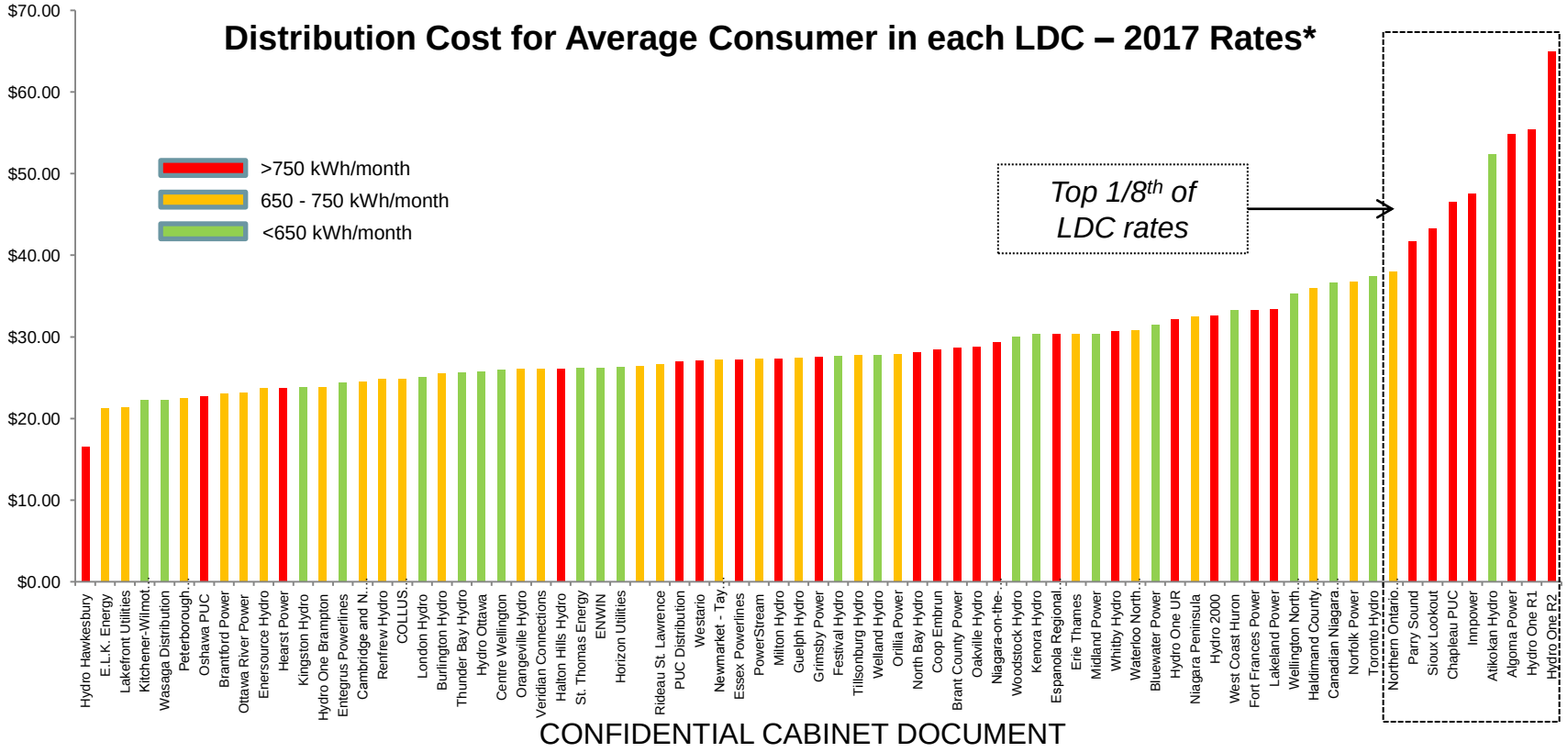
- Rural or Remote Rate Protection (RRRP) mitigates some of the high costs of electricity distribution in rural or remote areas of the Province. It is a legacy program of the old Ontario Hydro and has existed in its current form since 2001.
  - RRRP is funded by ratepayers in Ontario.
- Part of the program helps fund the costs of Hydro One customers classified into the "R2" residential rate class. There are 335,000 R2 customers across the Province. These customers have some of the highest Delivery costs in the Province.
  - From 2001-2016 the program provided $125.4 million annually to help defray these costs.
  - In the 2016 Speech from the Throne, this funding was expanded by $116.4M to a total of $241.9 million.
  - As of Jan 2017 R2 customers receive $60.50/month off their distribution costs.
- These customers still have high delivery and high distribution costs and are often faced with significantly higher than average bills.
  - The higher than average consumption patterns coupled with higher than average distribution rates has resulted in monthly bills many view as no longer affordable.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- While the RRRP helps mitigate some of the higher distribution costs for Hydro One R2 customers, there is an opportunity to provide further relief to consumers in relatively high-distribution cost outlier LDCs (top ~1/8th of distribution rate classes).
  - If expanded to the top 1/8th of distribution costs, this enhancement would also include Hydro One R1 customers (medium density), as well as LDCs with high distribution costs including: Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma.
- Mitigation could be provided by harmonizing distribution rates for these LDCs at the lowest distribution rate paid by an average consumer in this group.
  - Based on projected 2017 LDC rates, the lowest distribution rate paid by an average consumer in this group would be ~$38/month (with the highest being $65).
  - Is consistent with the OEB's mandated move to fully fixed distribution rates for all LDCs.
  - An estimated 700,000 customers would benefit from these enhancements.
  - Setting a lowest distribution rate across these LDCs would help mitigate geographic-based differences in rates for the consumers who are most impacted and often see such differences as inequitable.
- Mitigation for all electricity consumers would be provided by moving the existing RRRP program costs and the proposed enhancements from the electricity rate base to the tax-base.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- The table below shows what 2017 distribution costs are projected to be for the average consumer within each LDC across the province, and highlights the highest-cost distribution rates.
- The charts on the following slides show what the benefits would be in each LDC if the fiscal plan was used to support harmonizing distribution costs for customers of the LDCs in the top ~1/8th of rate classes at $38/month.



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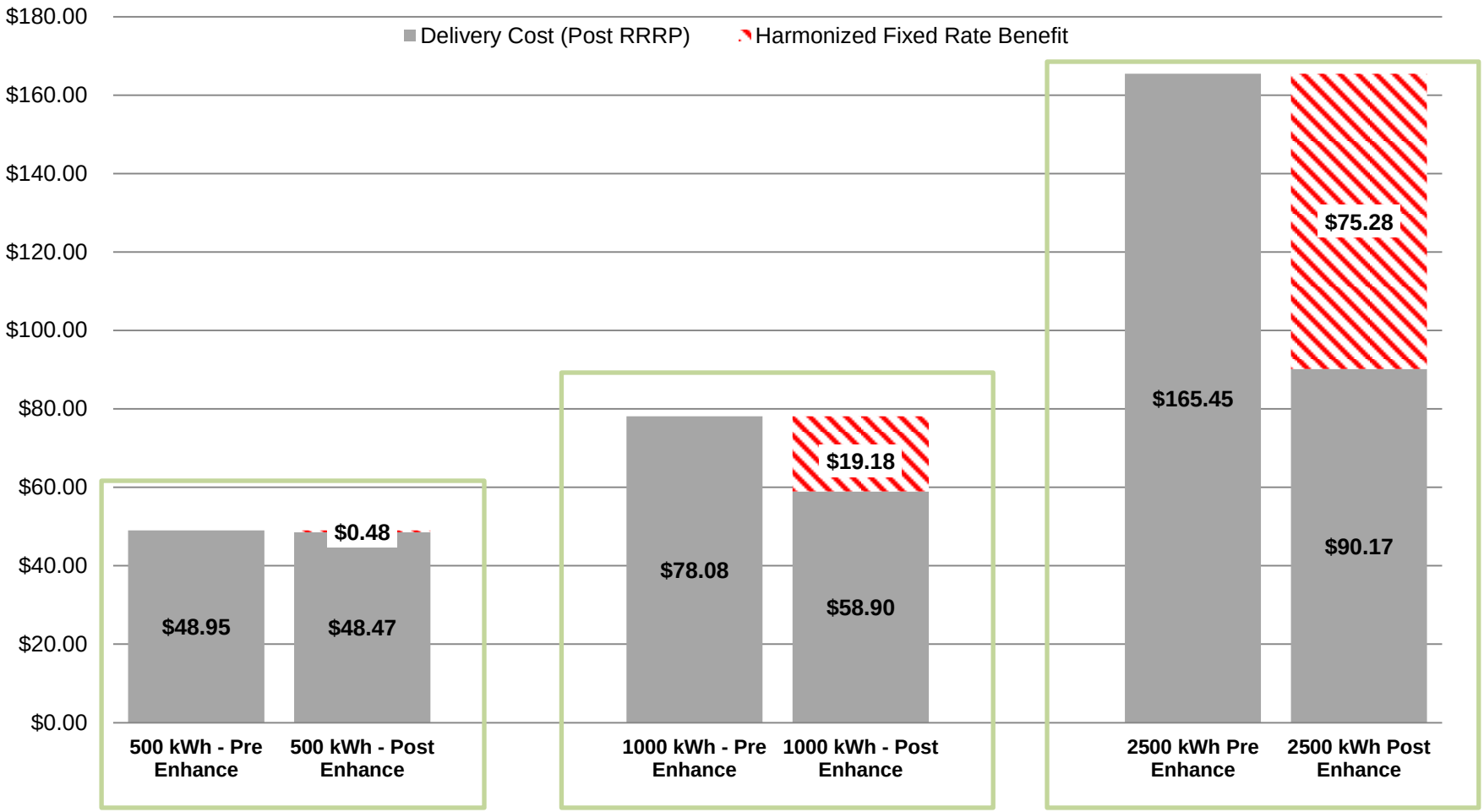
2017 Approved and Proposed (Decisions Pending – rates are subject to change).

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R2)



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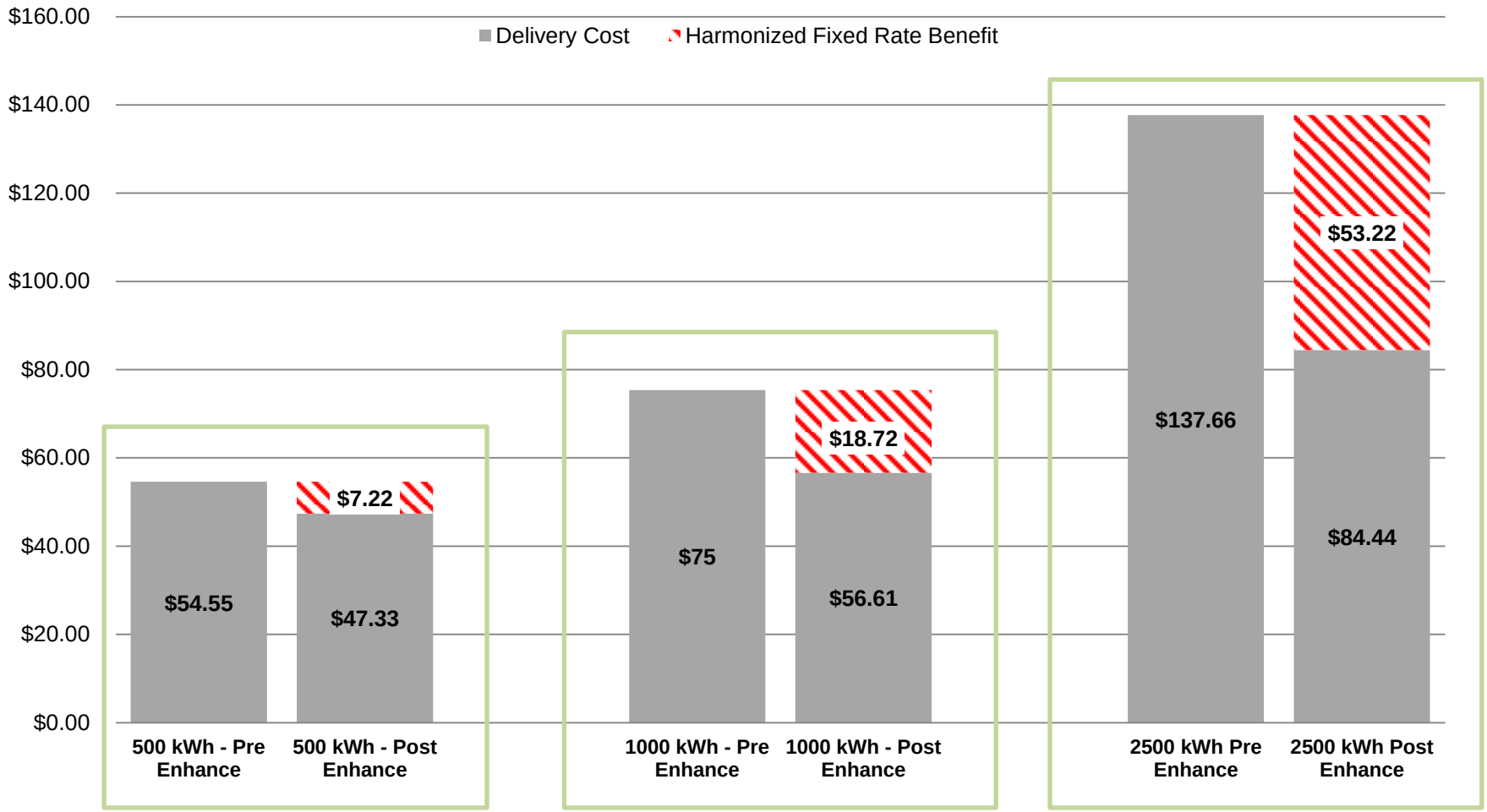
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R1)



Note: *Rates are for 2017 (either approved or proposed)*

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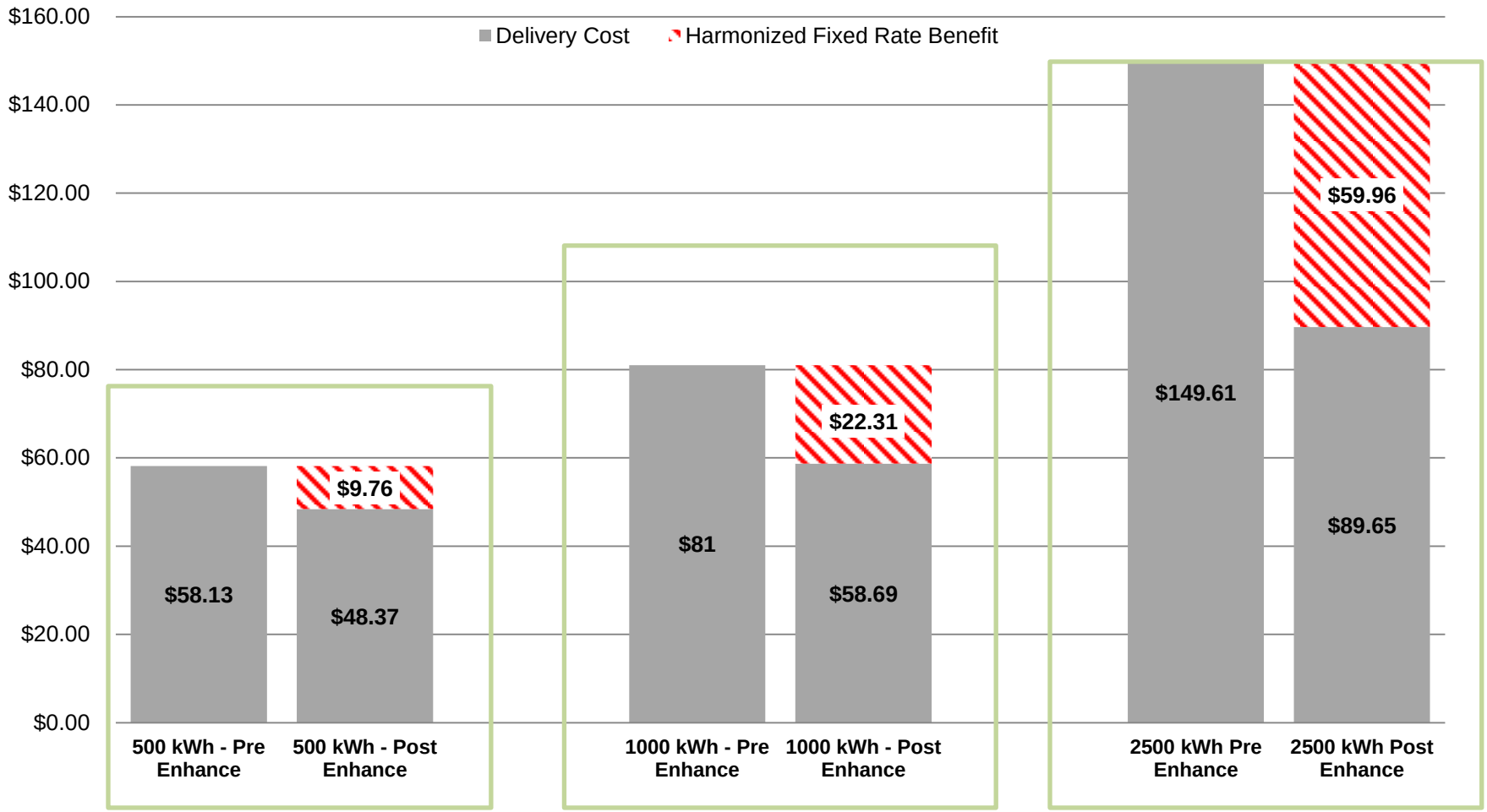
A. Harmonized Distribution Cost – Delivery Line Impact (Algoma Power)



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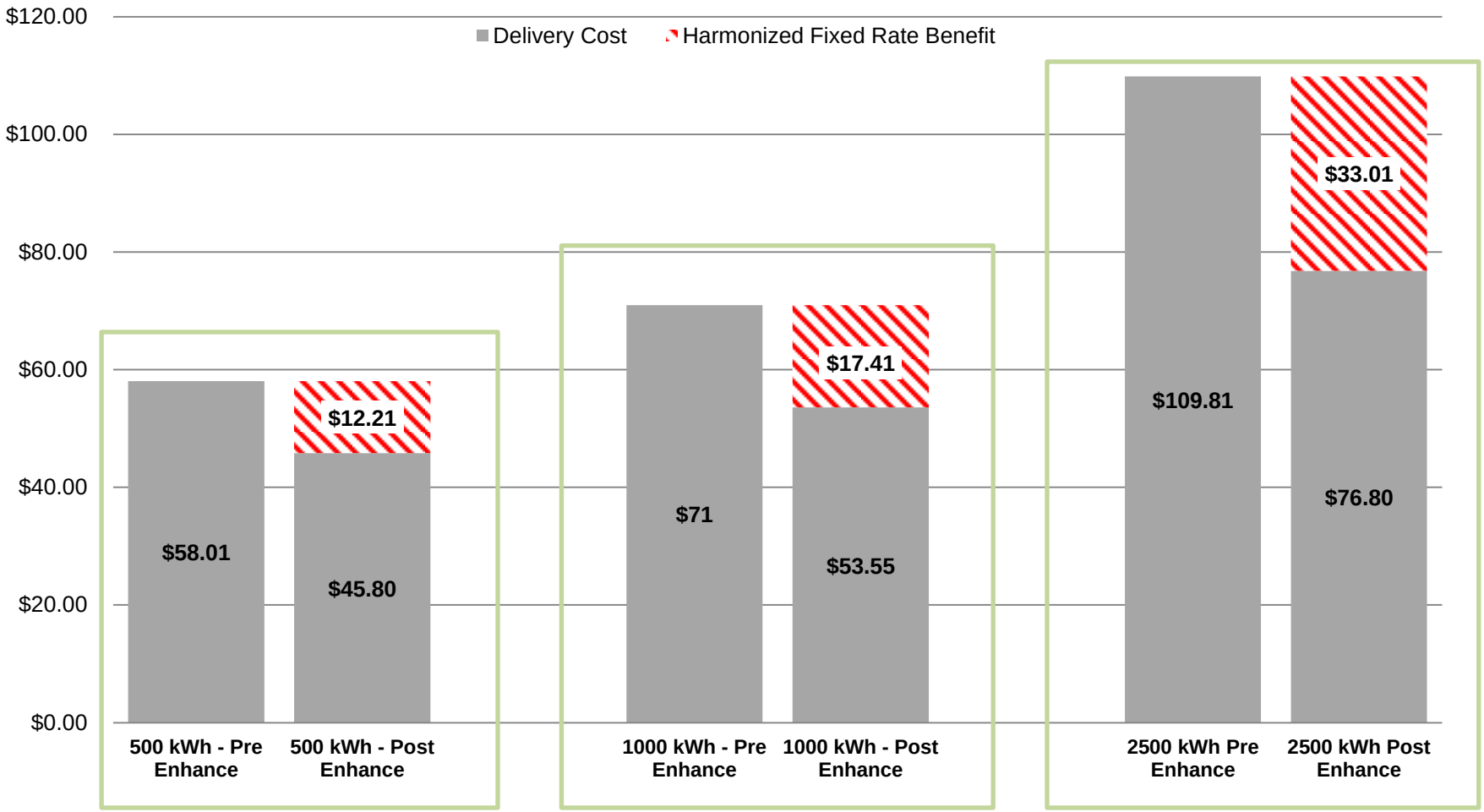
Note: *Rates are for 2017 (either approved or proposed).*
Algoma Power receives RRRP to support operational costs.

A. Harmonized Distribution Cost – Delivery Line Impact (Atikokan Hydro)



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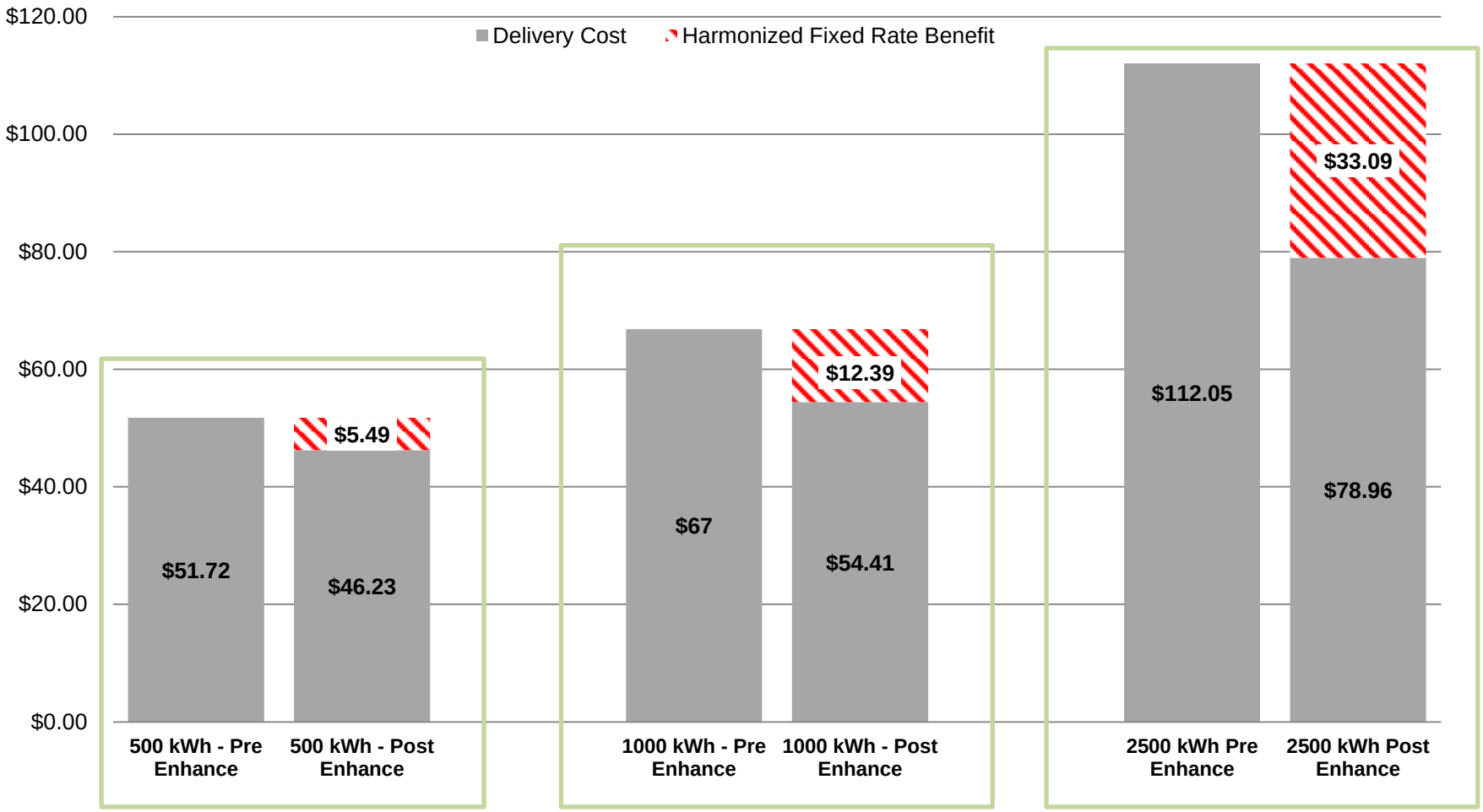
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (InnPower)



Note: *Rates are for 2017 (either approved or proposed)*

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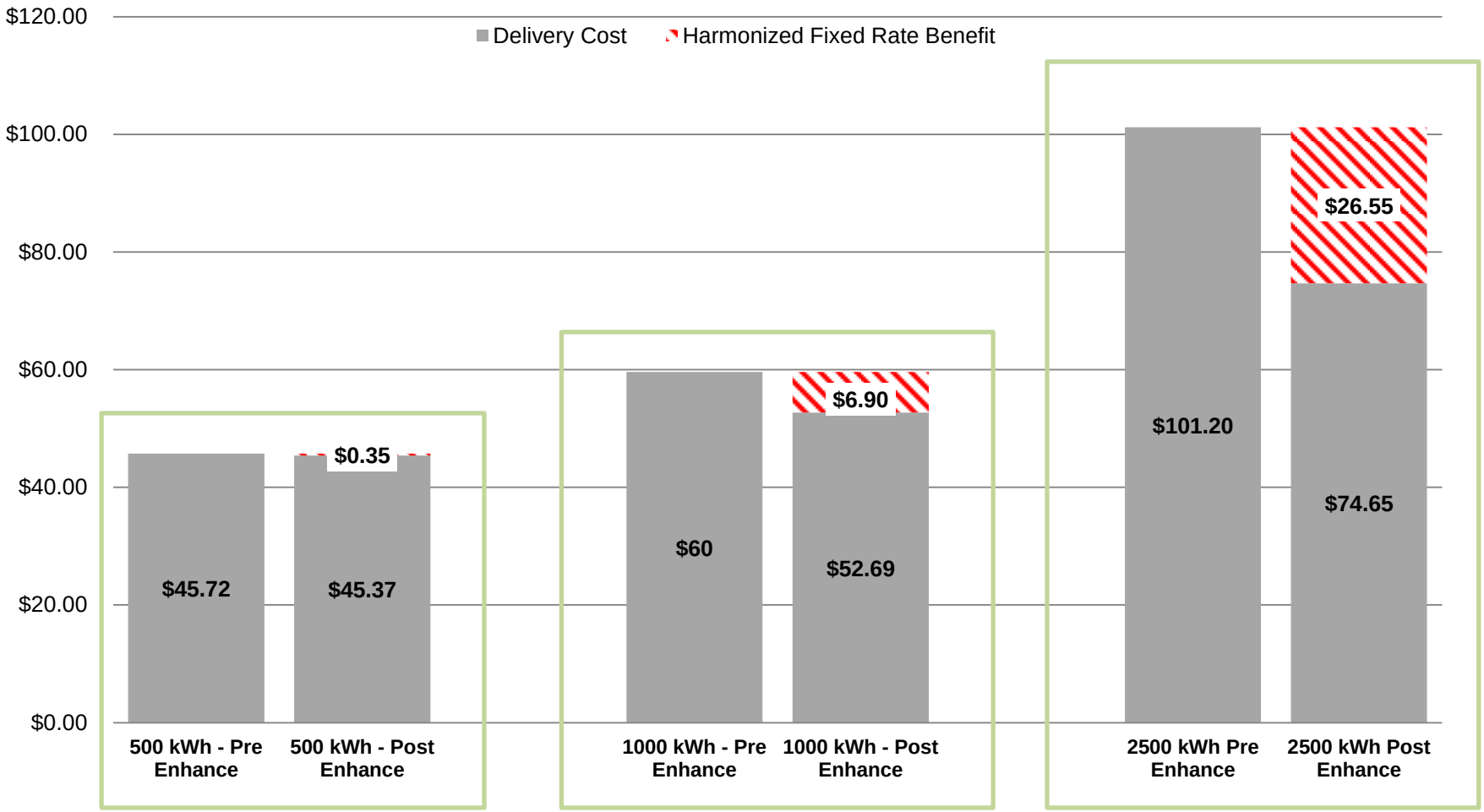
A. Harmonized Distribution Cost – Delivery Line Impact (Chapleau PUC)



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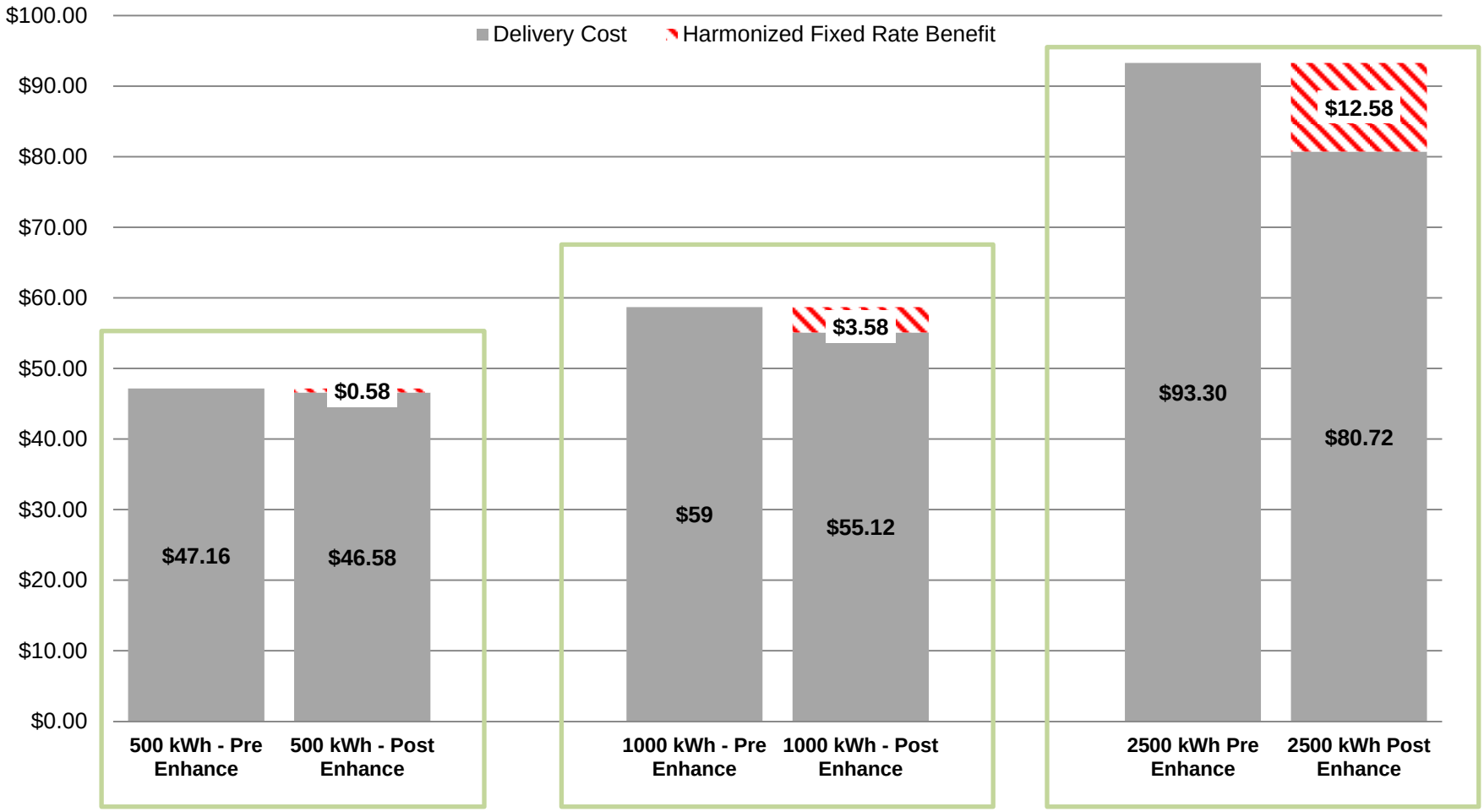
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Sioux Lookout Hydro)



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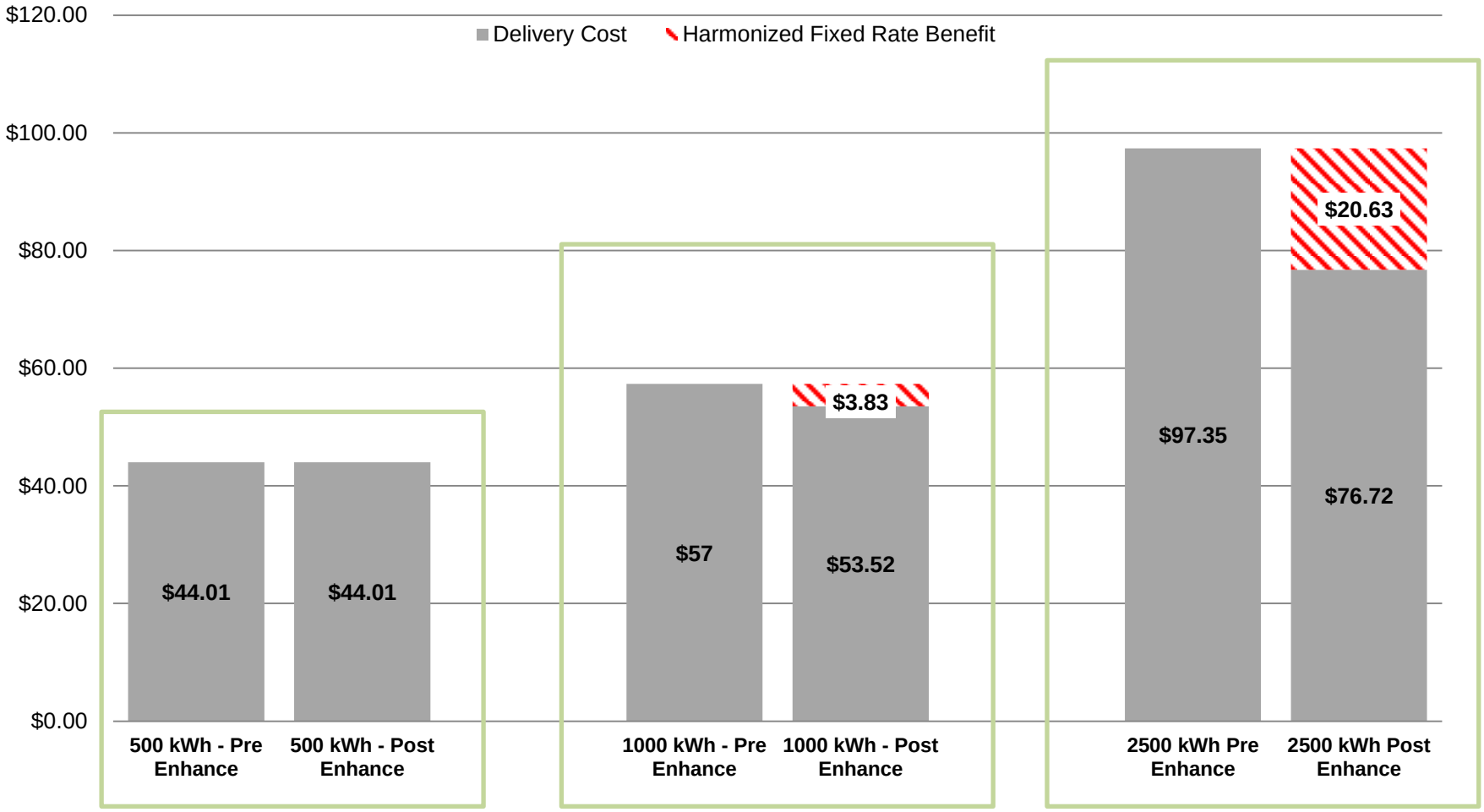
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Lakeland Power – Parry Sound)



Note: *Rates are for 2017 (either approved or proposed). Rates are for the Parry Sound territory within Lakeland Power. Other Lakeland Power customers (Huntsville area) not impacted.*

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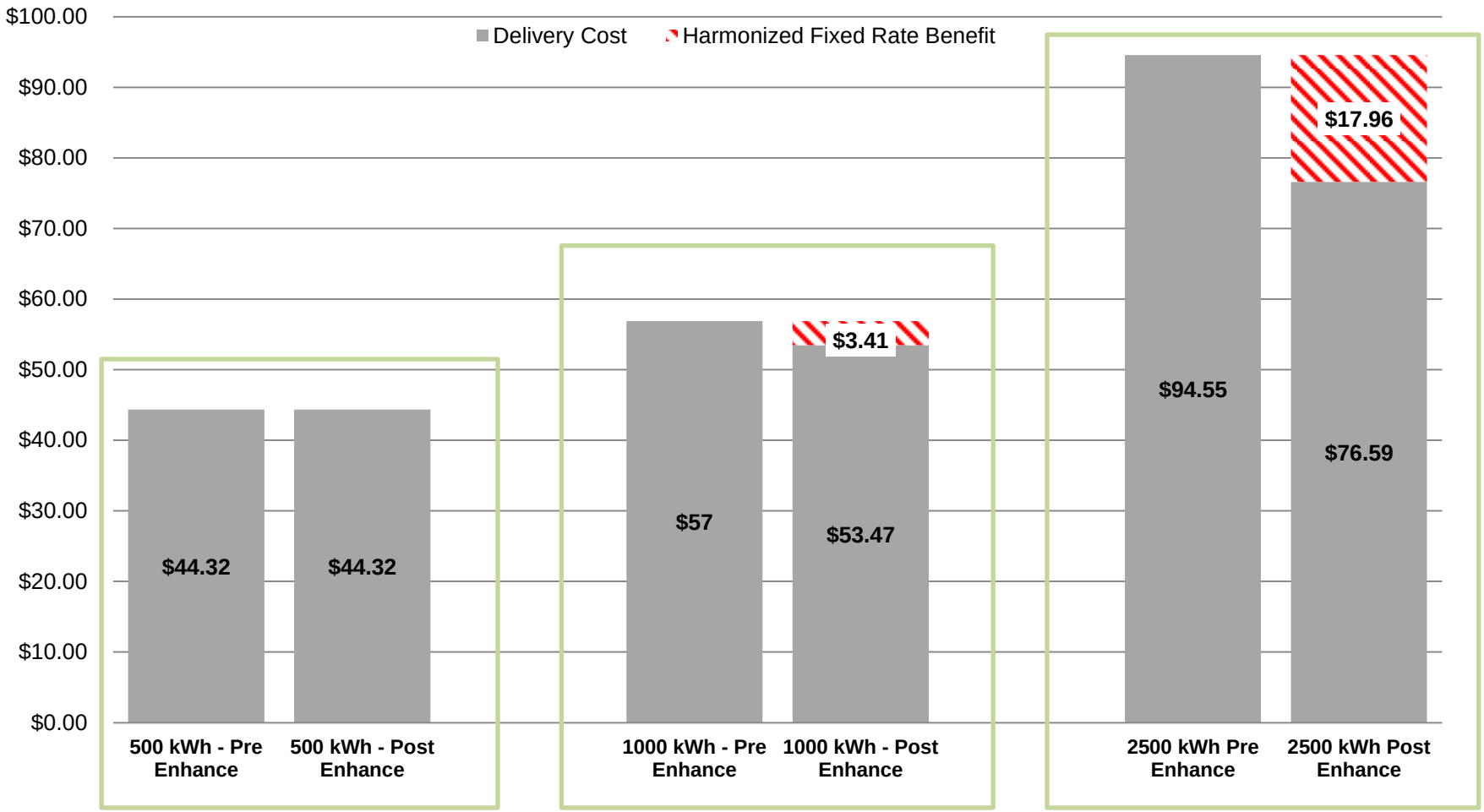
A. Harmonized Distribution Cost – Delivery Line Impact (Northern Ontario Wires Inc.)



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Note: *Rates are for 2017 (either approved or proposed)*

A. RRRP Enhancement – Considerations

Implementation

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
  - LDCs may need to be named explicitly in the legislation/regulation
  - A mechanism would also need to be created to ensure the level of benefit changes year to year
- LDCs will need to change their billing and customer information systems. OEB estimates that the implementation would take at least 6 months or more, following finalized regulations
- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis
  - Some options may impact OEB rate-setting processes and create disincentives towards Hydro One productivity and performance improvements.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.
- A mechanism will need to be created to ensure that LDCs/OEB/IESO/Province are aligned in the year-to-year forecasting and costing of the RRRP program and the enhancements.

A. RRRP Enhancement – Considerations (cont'd)

Fiscal

- As distribution costs vary year to year, forecasting fiscal impacts are challenging:
  - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate which could have a significant impact on fiscal requirements and ratepayer impacts.
  - The other high distribution cost LDCs generally have lower distribution cost increases, however, it is difficult to forecast fiscally the impact of the program until LDCs submit their cost of service applications to the Ontario Energy Board.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
TOTAL	**-**	**454**	**450**	**446**	**444**

Note: Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

B. Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application based program that lowers electricity costs of the most vulnerable consumers by a rebate directly on bills. The OESP is currently funded by the rate base.
- OESP benefits vary by income level and family size, and there are two benefit scales that include:
  - The basic program credit ranges from $30/month to $50/month.
  - An enhanced credit that ranges from $45/month to $75/month for consumers that are either Indigenous, use electric heat or have certain medical devices.
- The OESP launched on January 1, 2016, and in just over a year:
  - Almost 180,000 have been enrolled in the program representing 30% of the total targeted low-income population and some 278,000 applications have been received.
  - Almost $50 million in benefits have been provided to vulnerable consumers.
  - Some 172 intake agencies have been mobilized to assist low income consumers to apply for the OESP.
- To drive this uptake, the OEB has engaged in extensive outreach, including advertising in multiple languages, and continuing to work with partner agencies to develop a model for “application clinics” across the province to increase program awareness and uptake across the province.

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B. Ontario Electricity Support Program (OESP) (cont'd)

- There are a numbers of ways that the OESP program can be enhanced, including:
  - Working to get the OESP participation as close as possible to 100%:
    - Streamlining the application process to make it easier / quicker to get through (e.g., an alternative to the requirement to mail-in signed consent forms);
    - Putting in place a more aggressive communications strategy to make sure vulnerable communities are aware of the program; and
    - Exploring automatic OESP qualification for those who receive provincial programs (e.g., OW, ODSP).
  - Increasing the existing benefit scales by an additional 50% and expanding who benefits are provided to (see the following slide for details on what this enhancement would do).
- It is also recommended that the OESP be enhanced and also supported from the tax-base as part of the rate mitigation package.

B. Ontario Electricity Support Program (OESP) (cont'd)

- The tables below outline the existing OESP benefit scales and how the scales would be enhanced if increased by 50% and benefits are extended to additional groups (represented in the circled boxes):

Existing OESP Benefit Scales

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$30	$30	$34	$38	$42	$50	$50
	$28,001 - $39,000	-	-	$30	$34	$38	$42	$50
	$39,001 - $48,000	-	-	-	-	$30	$34	$38
	$48,001 - $52,000	-	-	-	-	-	-	$30

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$50	$55	$60	$75	$75
	$28,001 - $39,000	-	-	$45	$50	$55	$60	$75
	$39,001 - $48,000	-	-	-	-	$45	$50	$55
	$48,001 - $52,000	-	-	-	-	-	-	$45

Proposed +50% OESP Benefit Increase*

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$51	$57	$63	$75	$75
	$28,001 - $39,000	-	$40	$45	$51	$57	$63	$75
	$39,001 - $48,000	-	-	$35	$40	$45	$51	$57
	$48,001 - $52,000	-	-	-	-	$35	$40	$45

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$68	$68	$75	$83	$90	$113	$113
	$28,001 - $39,000	-	$60	$68	$75	$83	$90	$113
	$39,001 - $48,000	-	-	$52	$60	$68	$75	$83
	$48,001 - $52,000	-	-	-	-	$52	$60	$68

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***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

B. Ontario Electricity Support Program (OESP) – Considerations

Fiscal Impact

- Changes to legislation / regulation may be required to establish and define the parameters for OESP to receive funding from the tax-bas. The scope of changes would depend on the implementation / delivery mechanisms.
- Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.
- If OESP amounts are increased, it will need to be confirmed that the credit is not treated as taxable income. This was addressed in the current iteration of the OESP.
- Adding additional categories to the OESP matrix require will take time to implement as it will require changes to the central system as well as LDCs' billing systems. As well, the matrix will no longer follow the Low Income Measure (LIM), which could put additional pressure on the OESP and other provincial programs.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be).	-	178	239	290	334

C. Establishing a New LDC Affordability Fund

- For eligible low-income customers, the Home Assistance Program (HAP), delivered by LDCs under the Conservation First Framework, provides efficiency upgrades and education, at no cost, to help improve the energy efficiency and comfort of their homes and help customers manage their electricity bills.

- HAP does not address the needs of those customers that do not qualify as "low-income" but could benefit from conservation programs.
  - At the end of 2015, there were over 560,000***** residential electricity accounts in arrears; of these about 19,900****** (~3.6%) accounts were eligible to participate in low-income conservation and support programs.
  - According to the Ontario Energy Board (OEB), in 2015 about 60,000 customers had their electricity service disconnected.

Proposal: Establish Affordability Fund to Provide Existing Low-Income Conservation Program to Other Electricity Customers

- The Ministry proposes establishing an Affordability Fund which would be available to LDCs to provide similar energy efficiency measures as provided under HAP to targeted customers.
- The Affordability Fund would not be used to provide grants or financial assistance to customers to forgive all or a portion of their arrears or electricity bill.

*** Note:** Unverified numbers reported by LDCs to the OEB
**** Note:** Low-income customers identified through participation in LEAP

C. Establishing a New LDC Affordability Fund (cont'd)

Fund Details:

- An Affordability Fund would be accessible to LDCs only, and would target those customers who are most in need, such as those who are facing disconnection and who cannot qualify for the low-income programs.
  - By providing support for energy efficiency improvements, the Fund could help these customers reduce their future bills and avoid future disconnections.
  - The Fund would provide LDCs with an additional tool to provide assistance to their customers.

Eligibility Criteria/Fund Principles:

- Determination of eligibility could involve a number of factors and metrics:
  - Do not meet the definition of "low-income";
  - May have triggered action by an LDC collection department (e.g., are in arrears, have been placed on one or more payment plans, are due to be disconnected, etc.);
  - Priority could be given to eligible customers in electrically-heated homes, or other unique circumstances; and
  - Require financial assistance to pay for energy efficiency measures.

C. Establishing a New LDC Affordability Fund (cont'd)

Implementation

- ENERGY is currently in discussions with several large LDCs to determine the feasibility of establishing a Fund and to identify a willing LDC(s) to administer the funds.
  - LDCs have over 10 years of experience in delivering conservation programs, including experience specific to contracting for programs that target low-income customers.
  - LDCs are best positioned to identify and target their customers who are most in need.

- Given the scope of the Fund, an LDC would need a firm financial commitment up front before implementation. LDCs rely on rate-payer funding for most of their activities. The Affordability Fund would be a unique venture from an LDC perspective given that it is tax funded.

- LDCs would apply for funding to the Fund administrator, to offer energy efficiency measures to those customers that meet the targeted eligibility criteria.
  - Recipients could receive measures ranging from $3,000 to $5,000 per customer, at no or minimal cost. For example, measures available in the Home Assistance Program include:
    - Energy-saving light bulbs (LEDs); power bars; energy efficient window ACs, refrigerators, freezers, dehumidifiers; low-flow showerheads, hot water blankets, pipe wrap and faucet aerators (in homes with electric water heating); and
    - Programmable thermostats, weather stripping, insulation (in homes with electric heating).
  - Consideration could also be given to including cold climate air source heat pumps for electrically heated homes, which can range in cost from $7,000 to $13,000.
  - As an illustration, with $200 million, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

C. Establishing a New LDC Affordability Fund – Considerations

Considerations

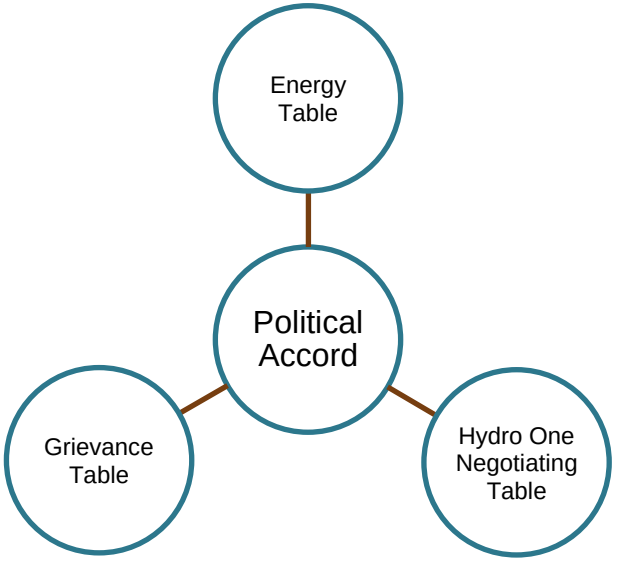
- The LDC Affordability Fund addresses a real need.
  - LDCs have expressed the need for an additional tool to provide assistance to their customers.
- Determining allocation of funds to LDCs:
  - Some LDCs may have a disproportionate number of customers in need of assistance; and
  - ENERGY is proposing to establish a Working Group, including the OEB, LDCs and potentially low income organizations to help develop funding criteria and allocation.
- LDCs need flexibility to target customers:
  - Not all customers who are in need will actively seek help;
  - Some customers in arrears may be "gaming the system" and not truly in need; and
  - LDCs recommend targeted outreach as opposed to broad marketing; a high volume of applications would limit the ability to deliver assistance to customers who need it most.

Fiscal Impact

- The LDC Affordability Fund would represent a fiscal impact of $200 million in fiscal year (FY) 2016/17.
- To allow for funds to flow in FY 2016/17, ENERGY would sign a Transfer Payment Agreement (TPA) with one or several LDCs to administer the Fund and transfer money before end of fiscal year.
- There is a fiscal risk if monies used for the Fund do not flow before FY year-end 2016/17 and for monies that are sitting in Hydro One at year-end (because of consolidation with province), and a corresponding fiscal pressure in the following years when the funds are flowed from Hydro One (H1) to ratepayers.

D. Implementing On-Reserve First Nations Delivery Credit

- ENERGY has a number of Tables with the Chiefs of Ontario (COO) and First Nations that include the Energy Table to discuss policy issues, the Hydro One Negotiating Table to discuss Hydro One shares, and the Grievance Table.
- The Grievance Table process was established at the request of COO as a means to avoid litigation to resolve historic grievances related to the energy sector and prevent these issues from impeding progress on broadening the ownership of Hydro One (H1).
- The cost of electricity and delivery charges were identified as the prevailing grievance at the First Nations-Ontario Energy Table meeting in Timmins in 2016, and the Minister of Energy agreed to explore options for a First Nations Rate through the Grievance Table process.



- In June 2016, following discussions on Hydro One shares and rates at COO's All Chiefs Conference, the Minister of Energy issued a letter directing the OEB to prepare a report providing "*advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers*".
  - OEB engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network. It also established an Advisory Committee with the Chiefs of Ontario's Grievance Committee.
- The Ontario Energy Board (OEB) has worked with COO to engage with First Nations to develop options for a First Nations electricity rate. The OEB provided a report to the Minister on December 29, 2016.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve. These challenges result in significantly higher electricity consumption levels and costs.
- First Nations living on reserve are particularly vulnerable low-income consumers: the average income is considerably lower compared to First Nations living off reserve and compared to non-Indigenous populations:
  - Average income of First Nations on reserve in Ontario: $21,100;
  - Average income of First Nations off reserve in Ontario: $31,527;
  - Average income of Non-Indigenous people in Ontario: $42,506; and
  - Median incomes on smaller reserves can fall below $10,000 (e.g., Cat Lake FN).
- Employment rates also differ between on-reserve First Nations, off-reserve First Nations and Non-Indigenous individuals, as well as other indices of social vulnerability:
  - 54% of Indigenous people over 15 years old and living on-reserve in Ontario are unemployed or not in the labour force;
  - The on-reserve unemployment rate is 18.3% compared to 6.4% in Ontario generally; and
  - 67% of families residing on-reserve are single parent families, compared to the Canadian equivalent of 19%.
- First Nations are seeking redress for historic grievances related to lands affected by energy developments, such as transmission or distribution infrastructure built on reserve lands and traditional territories where, in some cases, they may not have been appropriately consulted.
- Further, in some circumstances, linear infrastructure corridors cut First Nation reserves in half, significantly disturbing the use and management of an already small land base; the First Nation communities disturbed by the energy infrastructure report having experienced long wait times (e.g., 20 years) for their communities to get connected and receive the benefits of the energy derived from the local infrastructure.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
  - Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate;
    - The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of $13 to $20 million or 11 cents a month for a typical residential electricity consumer.
  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
  - Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.

- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.

- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

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  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
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- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.
- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

Distributor	Number of On-Reserve Residential Customers
Algoma Power Inc.	473
Attawapiskat Power Corporation	336
Bluewater Power Distribution Corporation	237
Cat Lake Power Utility Ltd.	80
Cornwall Electric Distribution	514
Hydro One Networks Inc.	16,679
Hydro One Remote Communities Inc.	2,579
PUC Distribution Inc. (Sault Ste. Marie)	264
Thunder Bay Hydro Electricity Distribution	332
Total Number of Customers	**21,494**

Source: OEB Report to Minister: Options for an Appropriate Rate Assistance Program for On-Reserve First Nations Electricity Consumers (Page 5).

D. Implementing On-Reserve First Nations Delivery Credit – Considerations

- Legislative and regulatory will be required to implement this program.
- The OEB will need to work with the LDCs to identify on-reserve consumers to administer the delivery rebate.
- Development of a communications plan containing the following elements:
  - Public release of the OEB report;
  - Commitment to working with LDCs on implementation details; and
  - Advanced notice to the OEB and COO regarding the ministry's decision to move forward on the OEB's recommendation and indicate a willingness to work collaboratively with COO on ways in improve community-LDC communication to ease implementation.
- The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- Recipients would continue to be eligible for programs such as the Ontario Electricity Support Program (OESP) and the Low-Income Electricity Assistance Program (LEAP).
- There is a risk that either non-status Indigenous communities without reserves or Métis could challenge the program on the grounds that it discriminates against them contrary to section 15 of the Charter. This risk is mitigated by the ameliorative purpose of the program and because targeting First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities. A genuinely ameliorative program that targets some people but excludes others is shielded from a s. 15 challenge if it serves or advances the ameliorative goal.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
On-Reserve First Nation Delivery Credit	-	20	20	20	20

Fiscal Roll-Up

Fiscal Impact ($M)*	16-17	17-18	18-19	19-20	20-21
RRRP Enhancements**	-	454	450	446	444
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be)	-	178	239	290	334
On-Reserve First Nation Delivery Credit	-	20	20	20	20
LDC Affordability Fund***	200	-	-	-	-
Total	200	652	709	756	798

***Note:** GA Smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met. See GA Smoothing – Fiscal Considerations for fiscal impact of GA smoothing if legal and accounting treatment not met.

****Note: Note:** Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

*****Note:** Funding for the LDC Affordability Fund is one-time in 2016/17.

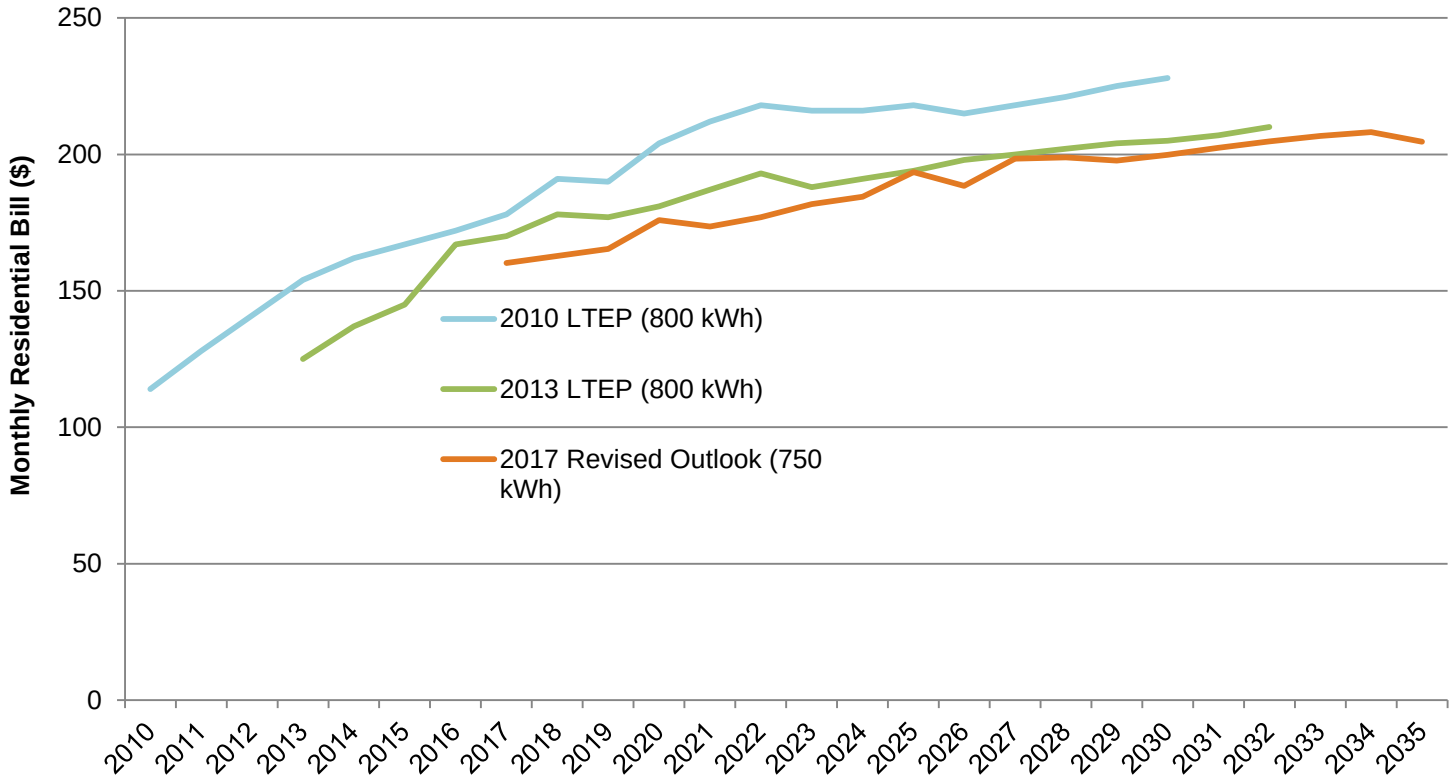
BENDING THE FUTURE COST CURVE OF ELECTRICITY

Existing Rate Mitigation Actions To Bend The Cost Curve

- Since 2013, the government has taken a number of actions to reduce electricity ratepayer costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.
  - Suspending the second round of the LRP process and the Energy-from-Waste Standard Offer Program, which is expected to save up to $3.8 billion in costs.

Existing Rate Mitigation Actions To Bend The Cost Curve (cont'd)

- The chart below shows how electricity rate forecasts have trended down over time.



Sources: *2010 LTEP (800 kWh/month); 2013 LTEP (800 kWh/month); Revised Ontario Planning Outlook (750 kWh/month as of December 2016) which includes: ICI expansion, RRRP update, 8% rebate, HQ agreement, suspension of LRP II and EFWSOP.*

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A. OEB – LDC Efficiencies and Rates

Leveraging the OEB

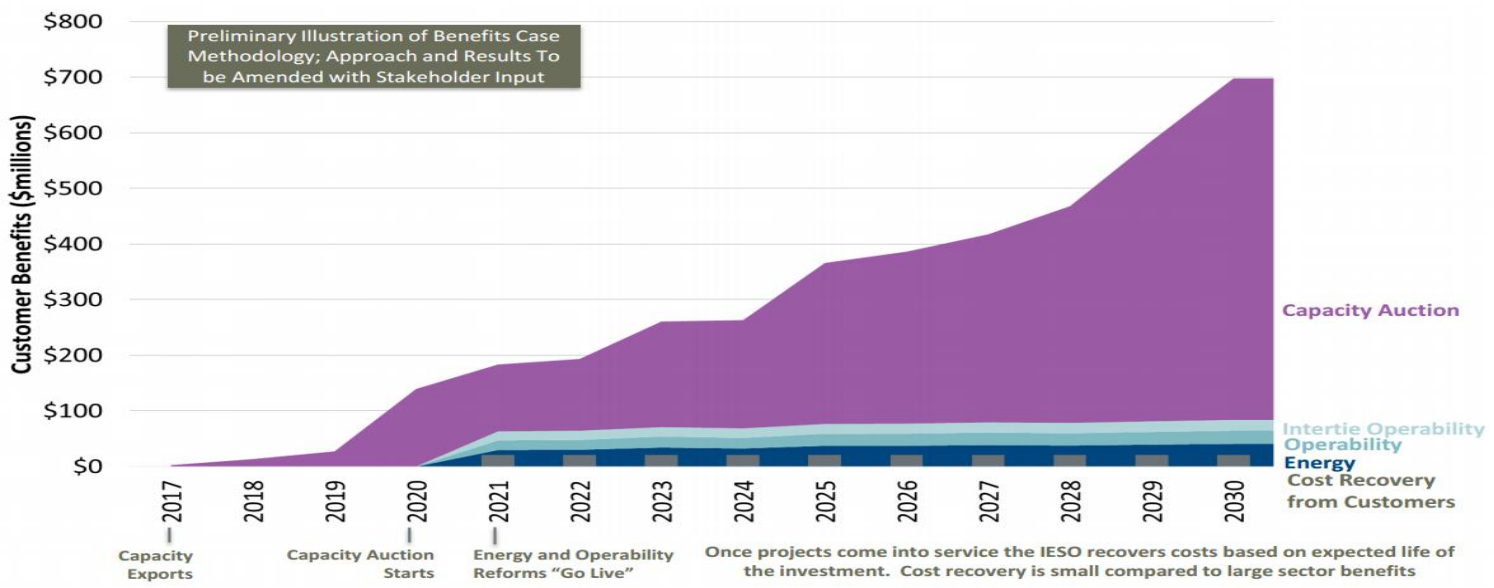
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- The OEB, through the Renewed Regulatory Framework for Energy (RRFE), has since 2012 attempted to move the distribution sector towards a performance/outcomes-based regulatory framework.
  - While new reporting requirements such as the LDC performance scorecard are positive developments, RRFE does not tie these system performance expectations to LDC financial performance.
- Encouraging shared partnerships on services between utilities will help reduce costs in the back end and encourage further innovation for small to medium sized utilities.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to make recommendations about how the distribution sector could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities.

Opportunities

- ENERGY could help promote and accelerate these efforts by asking the OEB to look at opportunities to further drive LDC efficiencies and productivity. This may indirectly incent LDC consolidation.
- In parallel, the OEB could be instructed to review business cases behind its own regulatory requirements to reduce “red tape” and eliminate costs that LDCs indicate are creating pressures on operating expenses.
- This could be done through the Minister's letter, the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes.

B. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.



GLOBAL ADJUSTMENT (GA) SMOOTHING

Overview – GA Smoothing

- The Global Adjustment (GA) has risen over the past decade as the province's electricity system has decarbonized.
  - The vast majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing, and fixed operations costs. The GA recovers these fixed costs of running the province's generation fleet, as well as the cost of conservation programs.
- The majority of the province's electricity generators are under 20-year contracts and account for less than half of the GA. Some of these generators will continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years).
  - There is an opportunity to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs.
  - GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief (i.e., similar to re-financing a mortgage). By recognizing that generation assets are expected to continue to provide residual benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.
- The GA Smoothing options under consideration are illustrative and show potential rate mitigation measures to meet a targeted 25%, 20% and 18% reduction from the projected residential bill in 2017.
  - These residential impacts are based on a forecast for a household connected to Toronto Hydro that consumes 750 kWh per month.
  - Actual ratepayer savings would vary due to differences in consumption patterns.
  - Targeted to residential and small business customers (RPP).

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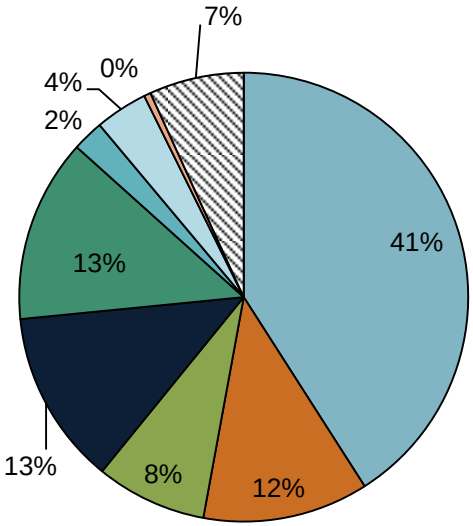
GA Smoothing – Cost Breakout

- The Global Adjustment (GA) accounts for the fixed costs, including capital costs, of running Ontario's generation fleet, as well as the cost of conservation programs. The GA is instrumental in maintaining a reliable electricity system by ensuring that sufficient generating capacity is available.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing and fixed operations costs. Most generators are on 20-year contracts with the exception of hydroelectric and nuclear plants. They operate on longer contracts (or are regulated on a cost-of-service basis by the OEB) in recognition of the much longer operating lives of these facilities.
- Chart below shows the breakout of the GA by generator and program types. In 2016, the GA costs were $12.3 billion. These costs will evolve over time as 2,181 MW of previously contracted generation comes online in the coming years.

2016 GA Cost: $12.3 billion



	GA ($M)
Nuclear	5,053
Hydro	1,473
Natural Gas	985
Wind	1,552
Solar	1,630
Biomass, Landfill and Byproduct	278
Conservation	467
IEI Program	60
OEFC*	842

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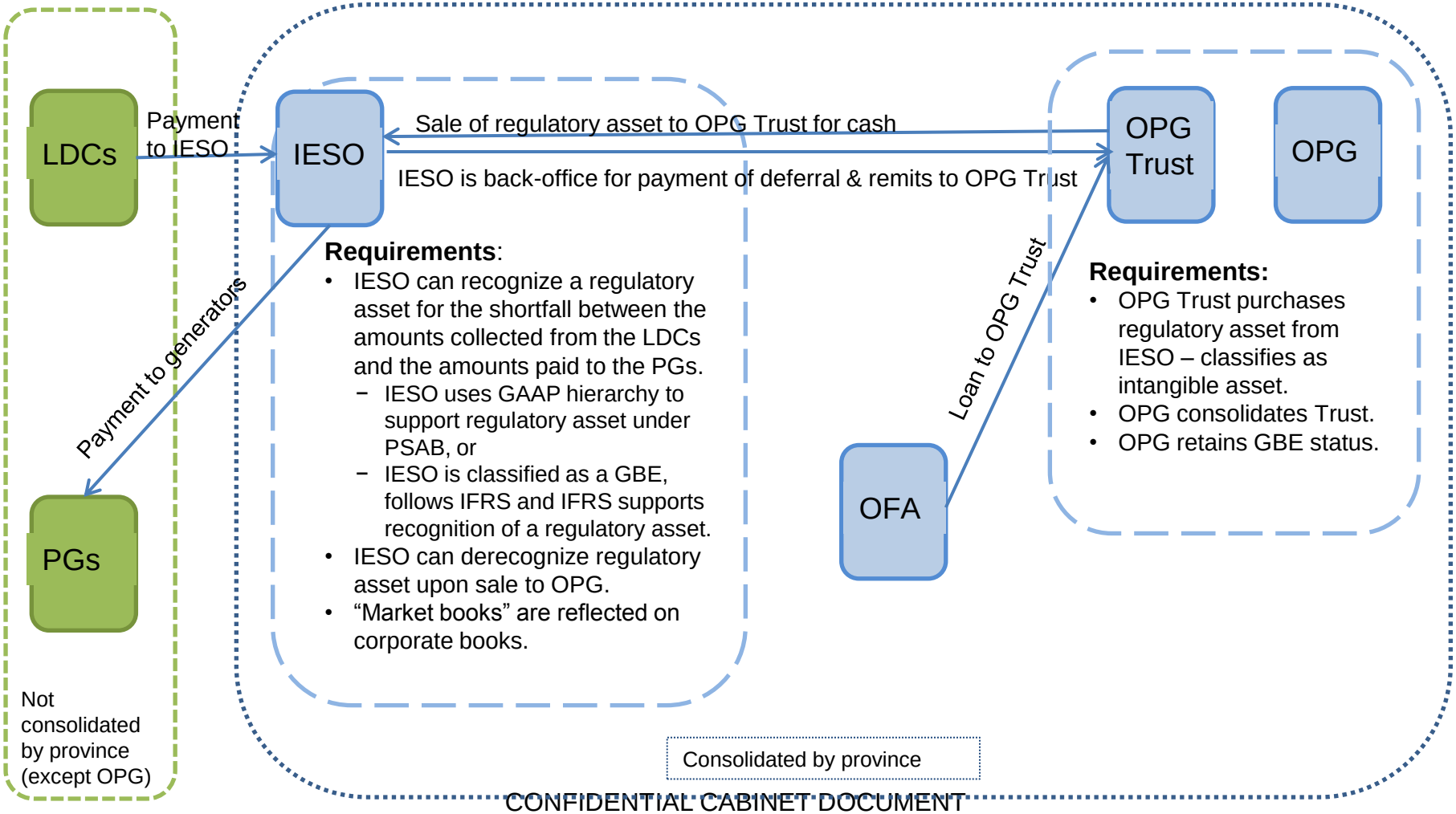
***Note:** OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.

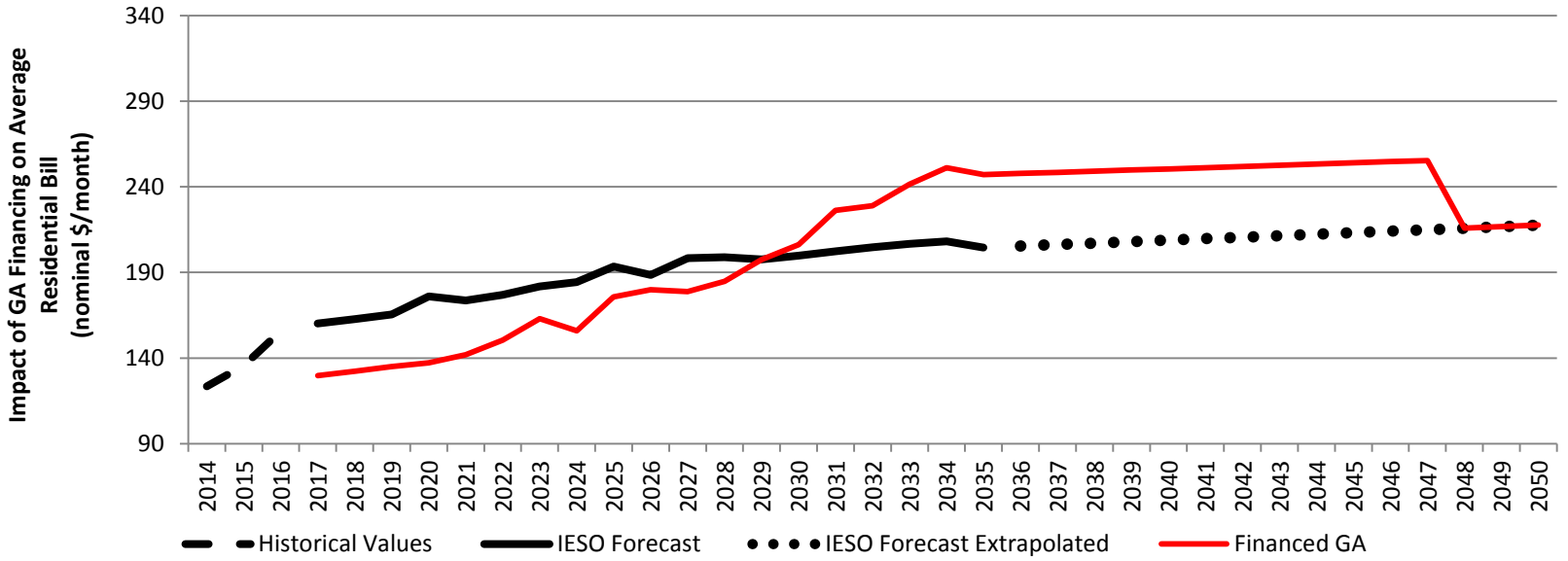
**** Note:** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

A. GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



B. Option 1: GA Smoothing for RPP Only (Borrow $2.2 billion in 2017, Residential Bills Lowered 25%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-27.0	-26.9	-26.9	-34.3	-28.1	-23.5	-16.6	-25.2	-15.7	-7.5	-17.4	-12.4	-0.1	5.7	21.1	21.4	30.7	38.1	37.6	37.5	37.3	37.2	37.0	36.8	36.7	36.5	36.4	36.2	36.1	35.9	35.8	0.0
Total Accumulated Debt *($ billion)*	2.2	4.6	7.0	10.2	13.1	15.7	17.8	20.8	23.2	25.0	27.7	30.1	31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6	24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8	6.0	3.1	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.2	2.3	2.4	3.2	2.8	2.6	2.2	3.0	2.4	1.8	2.7	2.4	1.6	1.1	-0.1	-0.1	-0.9	-1.6	-1.7	-1.8	-1.9	-2.0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.1	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.2 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 1: GA Smoothing for RPP Only – Residential Bills Lowered 25% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

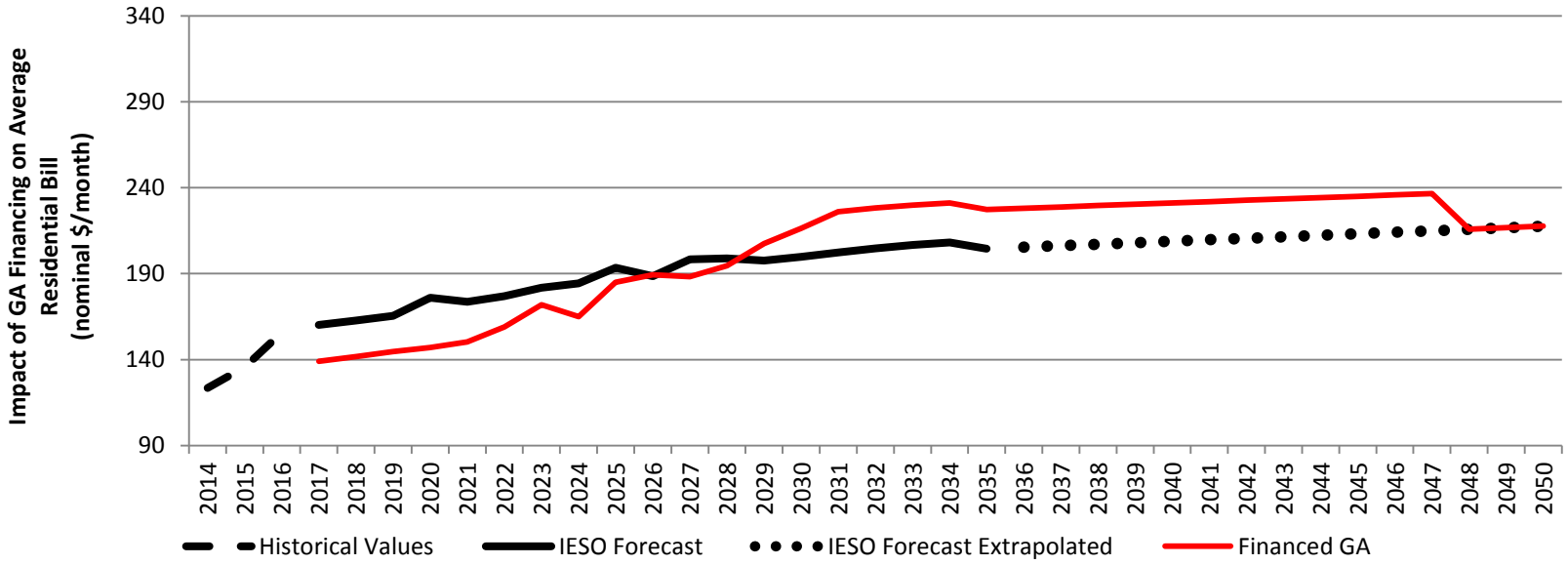
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-27	-27	-27	-34	-29
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		123	126	128	131	133
8% rebate		-10	-10	-10	-10	-11
HST		16	16	17	17	17
Revised Bill (includes HST)	**163**	**129**	**132**	**135**	**137**	**140**
Year-over-Year Change		-21%	2%	2%	2%	2%
Change from Forecast		**-25%**	**-25%**	**-24%**	**-28%**	**-25%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.5	-15.8	-8.8	-17.2	-7.5	0.9	-8.9	-3.7	8.7	14.7	20.9	20.7	20.6	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.7	19.6	19.5	19.4	19.3	19.3	19.2	0.0
Total Accumulated Debt *($ billion)*	1.6	3.2	4.9	7.2	9.3	11.0	12.3	14.4	15.7	16.5	18.0	19.3	19.5	19.3	18.6	17.8	17.0	16.1	15.2	14.3	13.3	12.2	11.1	10.0	8.7	7.5	6.1	4.7	3.2	1.6	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	1.6	1.6	1.7	2.4	2.1	1.8	1.3	2.0	1.4	0.7	1.6	1.2	0.3	-0.2	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-1.6	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $1.7 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

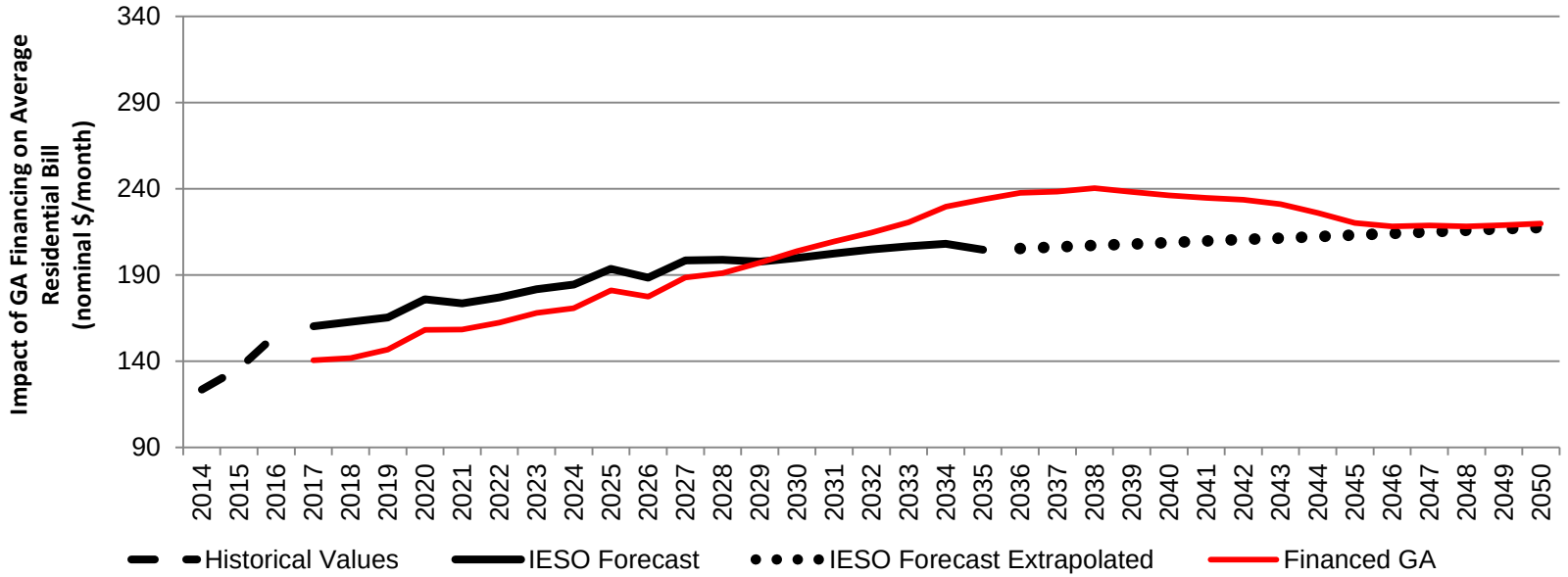
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 3: GA Smoothing for RPP Only (Borrow $1.4 billion in 2017, Residential Bills Lowered 18%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-17.5	-18.5	-16.6	-15.7	-13.5	-12.9	-12.2	-12.2	-11.0	-9.7	-8.8	-6.9	-0.6	3.4	6.2	8.6	12.2	19.0	25.8	28.4	28.4	29.5	26.8	24.2	22.2	20.4	17.3	12.2	6.2	3.7	3.3	2.0
Total Accumulated Debt *($ billion)*	1.4	3.1	4.6	6.1	7.5	9.0	10.4	12.0	13.5	15.0	16.5	17.9	18.8	19.5	20.0	20.3	20.3	19.8	18.5	17.0	15.5	13.7	12.1	10.6	9.1	7.8	6.7	5.9	5.7	5.6	5.6	5.7
Total Change in Accumulated Debt *($ billion)*	1.4	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.0	0.7	0.5	0.3	0.0	-0.6	-1.2	-1.5	-1.6	-1.8	-1.6	-1.5	-1.4	-1.3	-1.1	-0.7	-0.3	-0.0	-0.0	0.1

Notes: Assumes financing of all non-nuclear IESO contracts for an additional 10 years beyond the life of each contract and 15 year financing of the conservation cost in any given year. Assumes a a nominal interest rate of 5% (compounded monthly). IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

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B. Option 3: GA Smoothing for RPP Only – Residential Bills Lowered 18% (with Tax-Base Funded 8% Rebate and Social Programs)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-17	-18	-17	-16	-13
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		134	135	139	149	149
8% rebate		-11	-11	-11	-12	-12
HST		17	17	18	19	19
Revised Bill (includes HST)	**163**	**140**	**141**	**146**	**157**	**156**
Year-over-Year Change		-14%	1%	4%	7%	-1%
Change from Forecast		-18%	-19%	-18%	-17%	-17%

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

GA Smoothing – Accounting Considerations

- Analysis is not complete; several requirements (below) are high risk re: satisfactory resolution.
- Complexity of the structure, including the number of entities involved increases risk in and of itself.
- If all requirements can be met, an accounting analysis can be supported that results in: (1) no fiscal impact; and (2) no increase in net debt.
- IESO requirements – IESO mgmt, KPMG (Energy advisor and IESO auditor), OPCD and EY (OPCD advisor) are evaluating accounting risks:
  - IESO can recognize a regulatory asset for the shortfall between the amounts collected from the LDCs and the amounts paid to the PGs;
    - IESO uses GAAP hierarchy to support regulatory asset under PSAB; or
    - IESO is classified as a GBE, follows IFRS and IFRS supports recognition of a regulatory asset.
  - IESO can derecognize regulatory asset upon sale to OPG; and
  - "Market books" are reflected on corporate books.
- OPG requirements – OPG mgmt, PwC (OPG auditor), KPMG (Energy advisor), and OPCD are evaluating accounting risks:
  - OPG Trust purchases regulatory asset from IESO – classifies as intangible asset;
  - OPG consolidates Trust; and
  - OPG retains GBE status.
- No discussion with OAG; in previous Annual Reports, the OAG has raised concerns about the appropriateness of recognizing rate regulated assets and liabilities.

GA Smoothing – Legal Considerations

- The current GA amount paid by consumers is a regulatory charge. One of the requirements of a valid regulatory charge (as opposed to a tax) is that the person paying the charge either benefits from the regulatory scheme or causes the need for regulation.

- In principle, refinancing the GA to spread the costs of generation and conservation assets over the useful life of the assets presents only a low risk of being a tax, as each cohort of consumers pays for a proportion of the GA cost roughly equal to the proportion of the benefit they receive from the useful life of the assets.

- A proposal for refinancing the GA that appears to cross-subsidize near-term consumers at the expense of long-term consumers by back-loading costs more than if costs were spread equally over the estimated lifespan of generation and conservation assets presents a moderately high risk (more likely than not) of constituting a tax.

- Were the charge characterized as a tax, in the event of a challenge, it would be struck down by a court as unconstitutional and consumers would be entitled to recover their payments. This risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

GA Smoothing – Policy Considerations

- Borrowing money to smooth the Global Adjustment (GA), while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - In addition, should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- The impacts are also based on a GA forecast. Since the GA fluctuates, actuals will vary based on demand, the addition of new generation and natural gas prices.
  - A "true-up" mechanism will be required to account for the difference between the "estimate" and "actual" GA costs.

- If Class B electricity consumers, such as commercial and small industries, do not receive the benefit of GA Smoothing (i.e., because it is only targeted to RPP consumers) – consideration could be given to provide tax-based measures to off-set electricity costs (e.g., tax-credits, programs, etc).
  - Class B consumers have raised concerns about the cost of electricity and its impact on their business competitiveness.
  - Government is developing an option that would provide rate relief for Class B consumers.

- Given the legal framework the amount of GA smoothing needs to be proportionate to the generating contracts (i.e., 20-year) and the additional years of generation services still available (i.e., additional 10-years of service).

- Rating agencies and investors in the Province's debt may view this borrowing as an obligation of the Province, regardless of accounting treatment. Depending on the magnitude of the debt to be incurred could have an impact on the Province's borrowing cost.

GA Smoothing – Fiscal Considerations

- If the proposed legal and accounting treatment of the GA financing smoothing proposal is not implemented, there could be a negative impact on the province's fiscal plan, as shown below.

- The table below shows the projected fiscal savings /costs related to GA smoothing Options 1 and 2 under these two legal/accounting treatment scenarios

Fiscal Impact ($M)	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Without Proposed Legal/Accounting Treatment					
Option 1 - Bills Lowered by 25%, RPP Only*	2,266	2,372	2,633	3,096	2,775
Option 2 - Bills Lowered by 20%, RPP Only*	1,574	1,632	1,844	2,282	1,988
Option 3 - Bills Lowered by 18%, RRP Only*	1,487	1,585	1,524	1,503	1,429

*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

Source: Ministry of Energy

Legislative Authority – Considerations

1. Electricity Support Programs

- **RRRP, OESP and First Nations Rate:** Moving costs to the tax base and creating a First Nations rate will require amendments to OEBA. Regulatory amendments (442/01, 314/15, 275/04) will be required to address program details.

- **LDC Affordability Fund (2c):** In order to implement new LDC affordability fund the Province would need to enter into Transfer Payment Agreements with qualified third parties to administer the fund.

2. Bending the Future Cost Curve of Electricity

- No specific legislative or regulatory amendments identified. IESO may need to amend market rules. Agency MOUs/MOAs may require amendment.

3. GA Smoothing

- **Amendments to *Electricity Act, 1998* (EA) and *Ontario Energy Board Act, 1998* (OEBA)**
  - The EA allows the Lieutenant Governor in Council to cause an OPG Holdco to be created under the *Business Corporations Act.*
  - The mandate and governance of the Financing Subsidiary will be addressed through amendments to the EA. Governance provisions will be designed to address the accounting control indicators.
  - The Financing Subsidiary will require authority to recover principle, interest and administrative costs through GA from customers.
  - Legislation would authorize IESO to collect amounts on behalf of the Financing Subsidiary and settle accounts with the Financing Subsidiary as a service provider. Regulatory amendments to GA Regulations would require IESO to:
    - Separately settle and track amounts received from the Financing Subsidiary to lower GA (including maintaining variance accounts).
    - Separately settle and track amounts paid back to the Financing Subsidiary (including maintaining variance accounts).
    - Distributors would continue to collect from consumers and settle with IESO. Generators would continue to be paid by IESO.
  - OEBA-related amendments would allow for OEB oversight. Light touch would focus on the borrowing entity's recovery of administrative costs and its calculation of amounts owing in a period. Heavy touch would give OEB the discretion to determine repayment over time.
  - The certainty of the legislative mechanism to recover the debt and interest, and the extent of discretion of the OEB to alter either amount over time, will have impacts on the availability and cost of capital.
  - Further legal analysis is required as the GA option is developed.

Communication Plan

Objective:

- Demonstrate Ontario's commitment to lower electricity costs for ratepayers through new rate relief initiatives.

Strategic Approach

- High-profile Premier's announcement.
- News release, backgrounders, QA's are being prepared.
- A multimedia marketing and advertising campaign is being prepared on the topic of rate mitigation for electricity consumers.

From: Gadi Mayman
To: Mike Manning
Cc: Lynsey Wynberg
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 11:01:35 AM
Attachments: Cabinet Submission - Electricity Price Mitigation_Feb15 FINAL.pdf

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3:30 today doesn't work, but I'm available between now and 11:45 if that works for you, or we could talk tomorrow. I'm also forwarding to you a rather lengthy submission that Energy is presenting to Cabinet today. The key issues from our perspective are the Global Adjustment, which starts on slide 41.

From: Mike Manning
Sent: Wednesday, February 15, 2017 10:10 AM
To: Gadi Mayman
Subject: RE: GA Financing Terms

Not sure of your schedule, but would 3:30 work for you? Otherwise can find another time.
Mike

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 10:02 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
Subject: FW: GA Financing Terms

Mike, I don't know how much you know about this, but maybe it's time to bring you up-to-speed if you're not aware of what the government is thinking of doing on electricity rate mitigation. I'd be happy to fill you in whenever it's convenient for you. Ken has been in the loop through the piece, as it's struck me from the beginning that this is far more of an accounting issue than a funding one.
Regards,
Gadi

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 9:59 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: GA Financing Terms

I agree that from a funding perspective the Province, through the OFA (actually the OEFC, but that's just a detail), would be able to accommodate this, so I think it definitely becomes an accounting question. I'm under the impression that OPCD has already been linked in on this, but it would make sense to make sure that they are.
Regards,
Gadi

From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]

Sent: Wednesday, February 15, 2017 9:56 AM

To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>

Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Subject: GA Financing Terms

Hi Gadi,

Energy was talking with OPG yesterday about GA Financing modelling. One of the simplifying assumptions in the model is the ability to build up interest without any payments for quite long periods of time (10 years +). This contributes to the debt build up, but allows for the large, early year rate reductions.

OPG is going to reality check this based on what it thinks a 3rd party lender would expect. At a high level, they have suggested that interest capitalization would be unrealistic beyond 1 year.

What do you think is realistic if OFA acts as lender? I assume the Province may have some more flexibility, but would require terms that meet the asset test for accounting purposes. Should we link in with OPCD as well on this question?

Thanks,

Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
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w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

Ontario

Electricity Price Mitigation

Ministry of Energy

February 15, 2017

Minister

Deputy Minister

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in transmission and local distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP)).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no new NUG contracting and demand response).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate – $11/month savings, updating Rural or Remote Rate Protection (RRRP) – $45/month savings, expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants and suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.

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

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

- On a number of occasions the Premier has indicated publicly that further relief on electricity prices will be provided to consumers in the near term.

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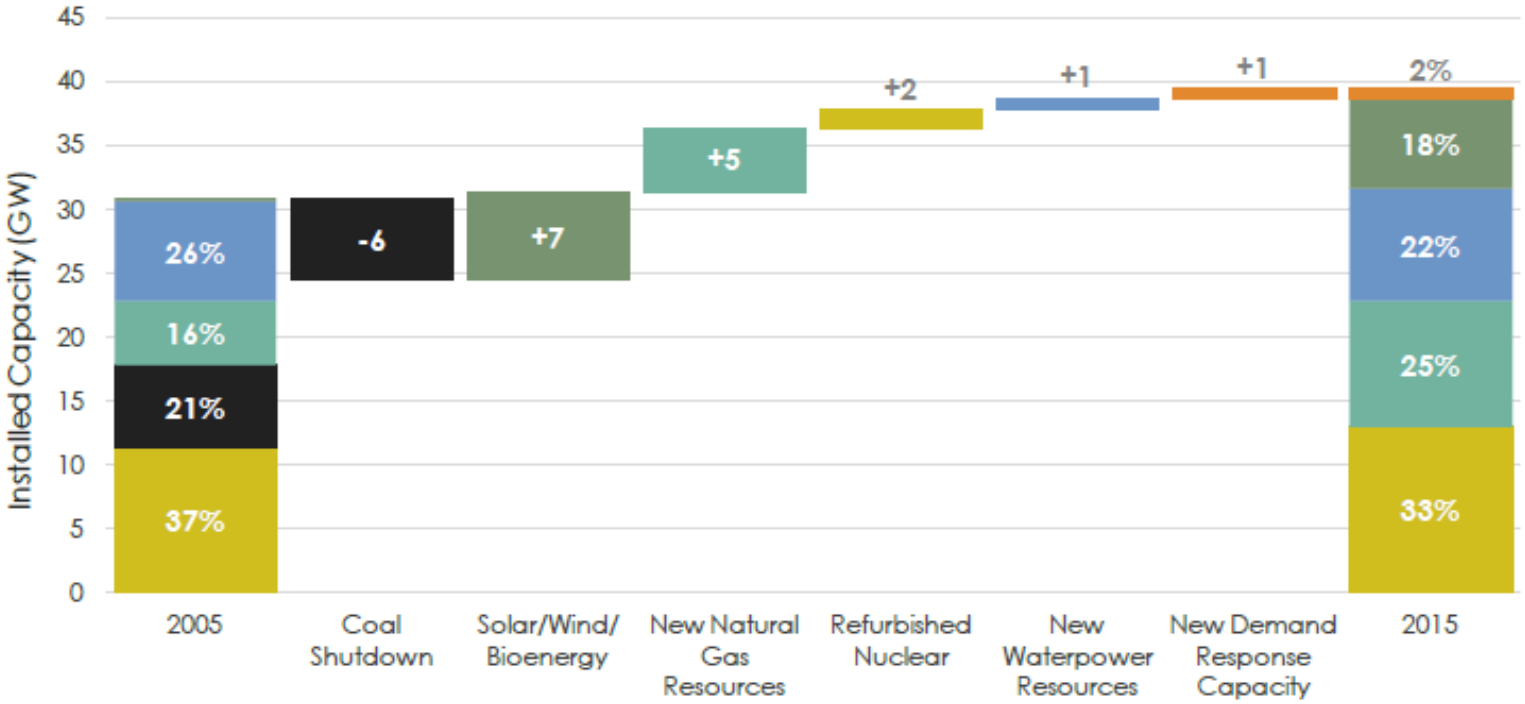
Context – Infrastructure Investments

- In the eleven year period between 2005 and 2015, government added new electrical capacity to Ontario's grid to restore reliability, replace coal and meet environmental objectives.



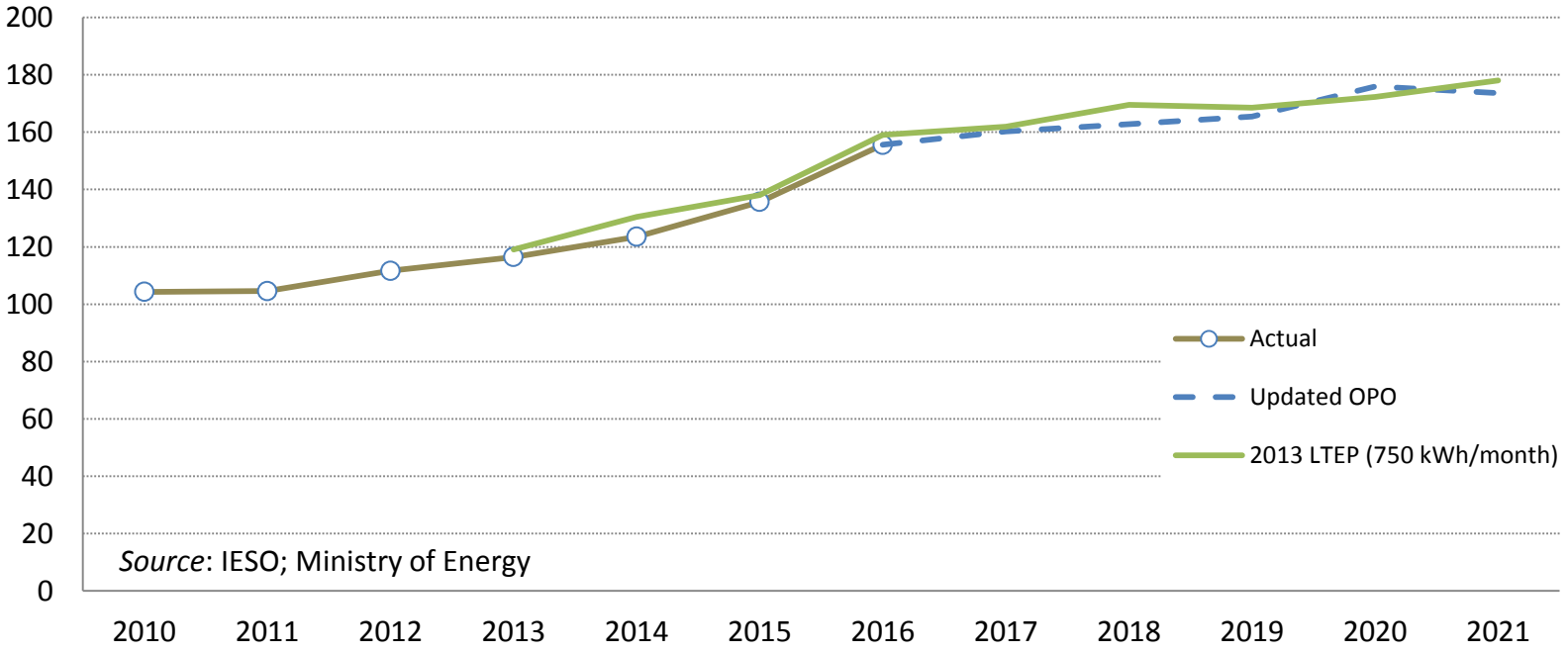
Source: IESO Ontario Planning Outlook

Context – Electricity Prices

- Electricity price increases have generally outpaced inflation. There have been several government policies that have impacted electricity prices over the past several years, including: HST, the Industrial Conservation Initiative, the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge (DRC).

Illustrative Typical Residential Electricity Bills

Historical and Forecast in $/month



Rate Mitigation Proposal

- Three approaches are proposed:

  1) Helping the most vulnerable by enhancing electricity support programs and shifting cost onto the tax-base:
     - Rural or Remote Electricity Rate Protection (RRRP) Enhancement (Delivery Charge Relief);
     - Ontario Electricity Support Program (OESP) Expansion;
     - LDC Affordability Fund; and
     - On-Reserve First Nations Delivery Credit.

  2) Ongoing activities to bend the future cost curve of electricity:
     - Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates; and
     - Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.

  3) Smoothing the global adjustment (GA) to provide significant and immediate rate relief through cost deferral of the GA:
     - Implementation Model; and
     - Smoothing Mechanism.

- The following slides provide additional information on the above initiatives.

ELECTRICITY SUPPORT PROGRAMS TO HELP THE MOST VULNERABLE

Electricity Support Programs to Help the Most Vulnerable

- To date, a number of electricity support programs are funded through the electricity rate-base. There is opportunity to provide support to a more targeted subset of customers who are disproportionately affected by increased electricity costs and to shift these costs to the tax base.

- These customers include:
  - **High Delivery Cost Customers:** Some customers in rural areas where the cost to delivery electricity is high can experience difficulty in reducing their electricity bill through conservation, particularly when reliant on electric heating.
  - **Low-Income Customers:** Rising electricity costs make up a disproportionally large amount of the household expenditures for low-income households.
  - **First Nation On-Reserve Customers:** On-Reserve First Nations customers experience challenges with energy affordability and are seeking to address historical grievances associated with electricity system infrastructure.

- To provide targeted assistance to the customers and alleviate electricity cost burden, ENERGY proposes to:

  a. **Enhance Rural or Remote Rate Protection** (RRRP) by funding its costs through the tax base and providing additional support to customers of designated Hydro One rate classes and other high distribution cost Local Distribution Companies (LDCs).

  b. **Enhance Ontario Electricity Support Program** (OESP) by funding its costs through the tax base and increasing eligible benefits by 50%.

  c. **Establish an LDC Affordability Fund**, providing energy efficiency measures at no or minimal cost to those struggling to pay electricity bills and are ineligible for low-income conservation or support programs.

  d. **Implementing On-Reserve First Nations Delivery Credit**, to remove Delivery charges for on-reserve First Nations customers.

A. Delivery and Distribution Charge – Background

- The **Delivery** line on a typical consumer bill is specific to a consumer's Local Distribution Company (LDCs) and accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.

SAMPLE MONTHLY BILL STATEMENT

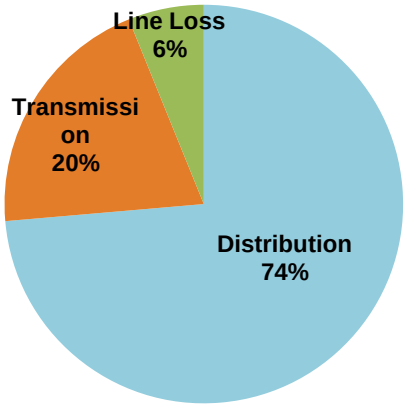
Anytown Hydro-Electric Limited

Account Number:
000 000 000 000 0000

Meter Number:
00000000

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

Cost breakdown of Delivery Line for an Average Residential Bill*



* Toronto Hydro Bill @ 750kWhs

A. Rural or Remote Rate Protection Program – Background

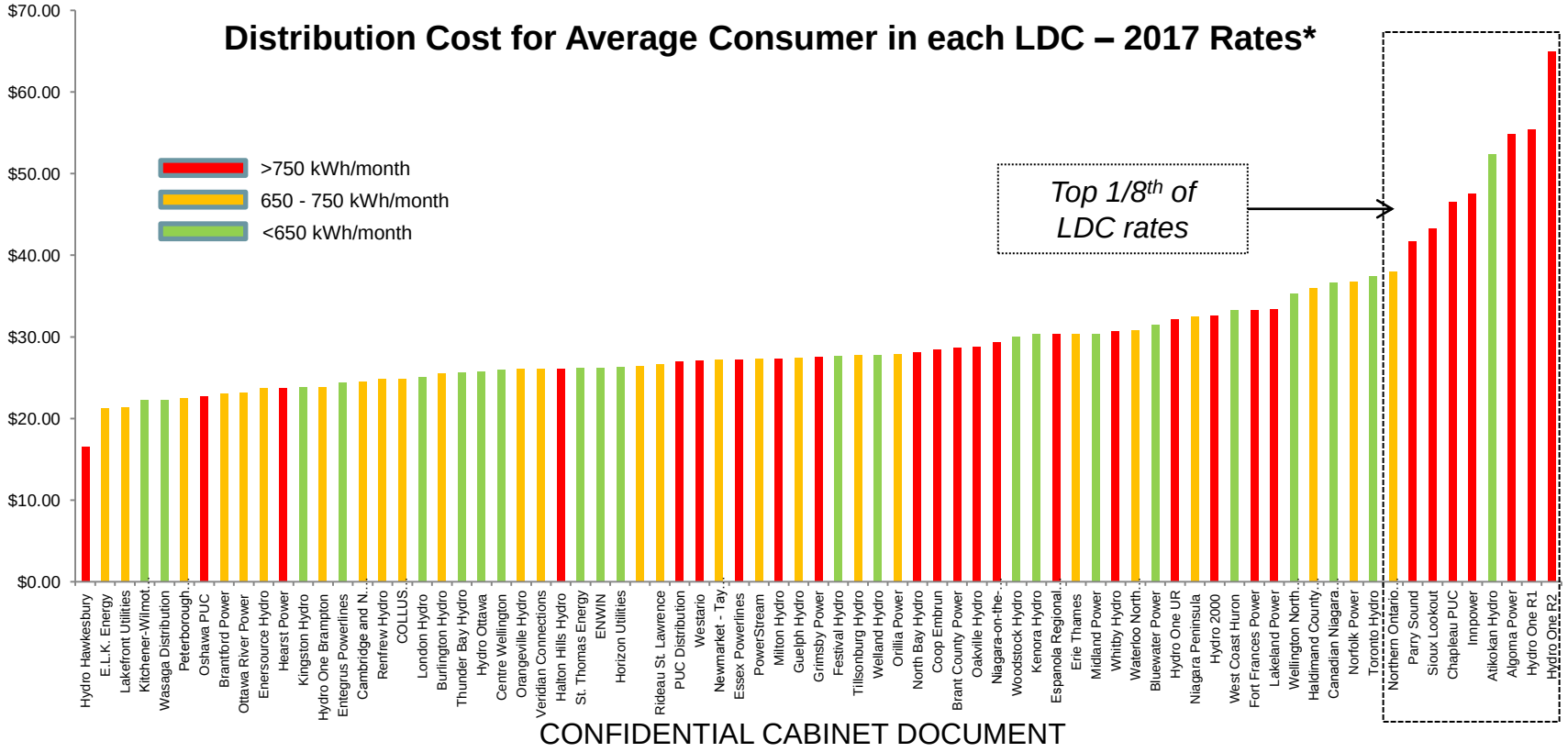
- Rural or Remote Rate Protection (RRRP) mitigates some of the high costs of electricity distribution in rural or remote areas of the Province. It is a legacy program of the old Ontario Hydro and has existed in its current form since 2001.
  - RRRP is funded by ratepayers in Ontario.
- Part of the program helps fund the costs of Hydro One customers classified into the "R2" residential rate class. There are 335,000 R2 customers across the Province. These customers have some of the highest Delivery costs in the Province.
  - From 2001-2016 the program provided $125.4 million annually to help defray these costs.
  - In the 2016 Speech from the Throne, this funding was expanded by $116.4M to a total of $241.9 million.
  - As of Jan 2017 R2 customers receive $60.50/month off their distribution costs.
- These customers still have high delivery and high distribution costs and are often faced with significantly higher than average bills.
  - The higher than average consumption patterns coupled with higher than average distribution rates has resulted in monthly bills many view as no longer affordable.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- While the RRRP helps mitigate some of the higher distribution costs for Hydro One R2 customers, there is an opportunity to provide further relief to consumers in relatively high-distribution cost outlier LDCs (top ~1/8th of distribution rate classes).
  - If expanded to the top 1/8th of distribution costs, this enhancement would also include Hydro One R1 customers (medium density), as well as LDCs with high distribution costs including: Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma.
- Mitigation could be provided by harmonizing distribution rates for these LDCs at the lowest distribution rate paid by an average consumer in this group.
  - Based on projected 2017 LDC rates, the lowest distribution rate paid by an average consumer in this group would be ~$38/month (with the highest being $65).
  - Is consistent with the OEB's mandated move to fully fixed distribution rates for all LDCs.
  - An estimated 700,000 customers would benefit from these enhancements.
  - Setting a lowest distribution rate across these LDCs would help mitigate geographic-based differences in rates for the consumers who are most impacted and often see such differences as inequitable.
- Mitigation for all electricity consumers would be provided by moving the existing RRRP program costs and the proposed enhancements from the electricity rate base to the tax-base.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- The table below shows what 2017 distribution costs are projected to be for the average consumer within each LDC across the province, and highlights the highest-cost distribution rates.
- The charts on the following slides show what the benefits would be in each LDC if the fiscal plan was used to support harmonizing distribution costs for customers of the LDCs in the top ~1/8th of rate classes at $38/month.



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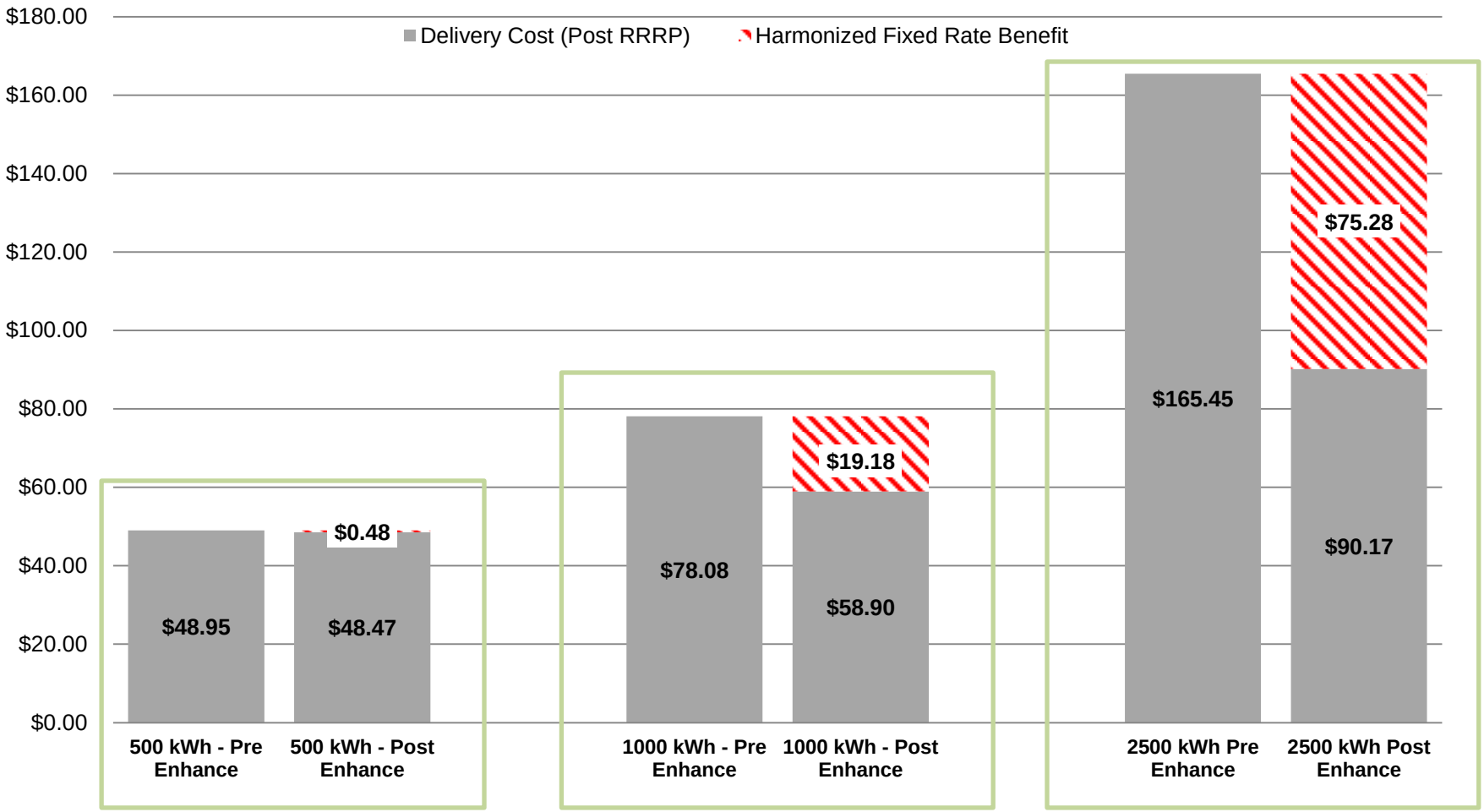
2017 Approved and Proposed (Decisions Pending – rates are subject to change).

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R2)



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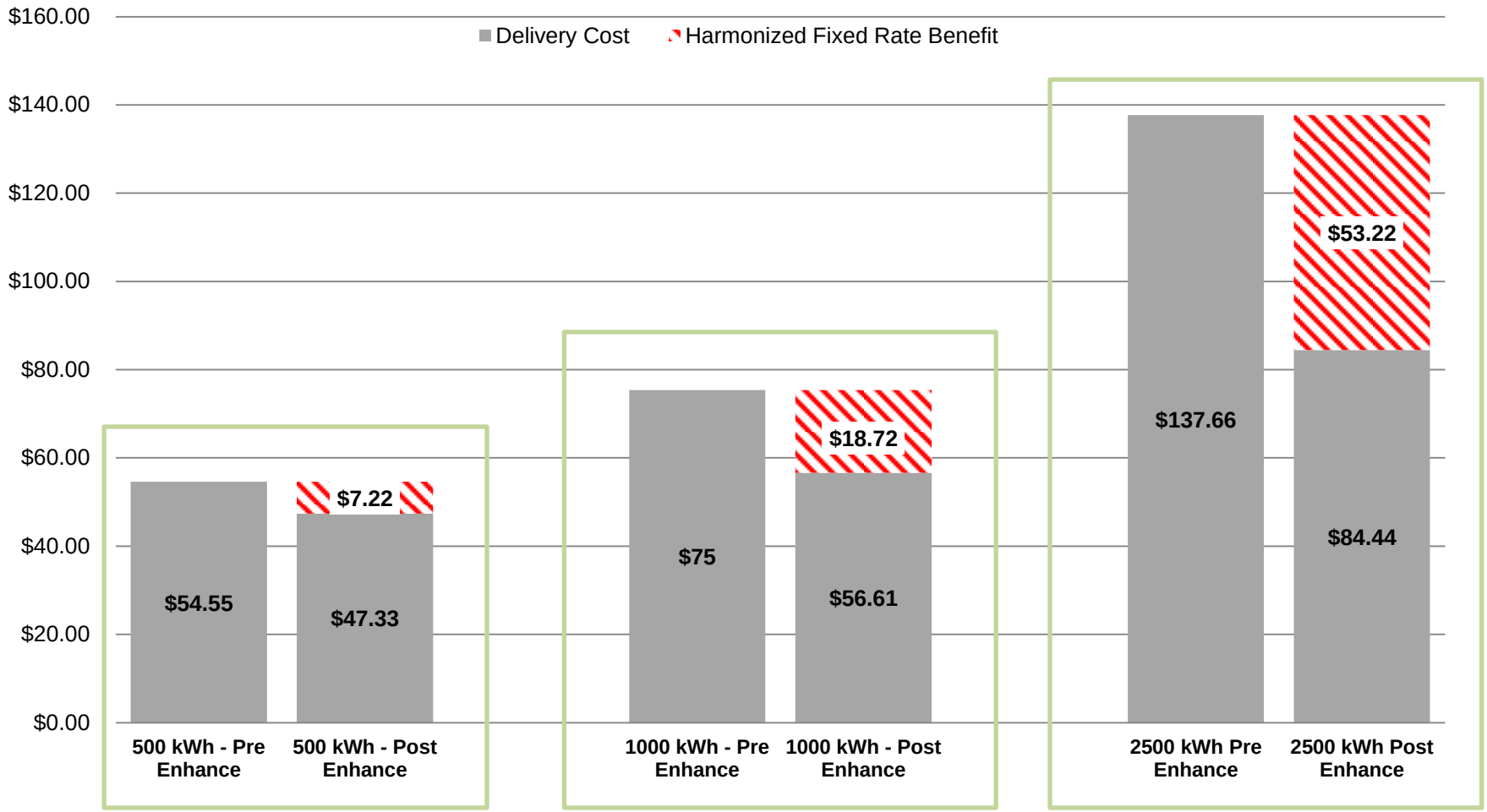
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R1)



Note: *Rates are for 2017 (either approved or proposed)*

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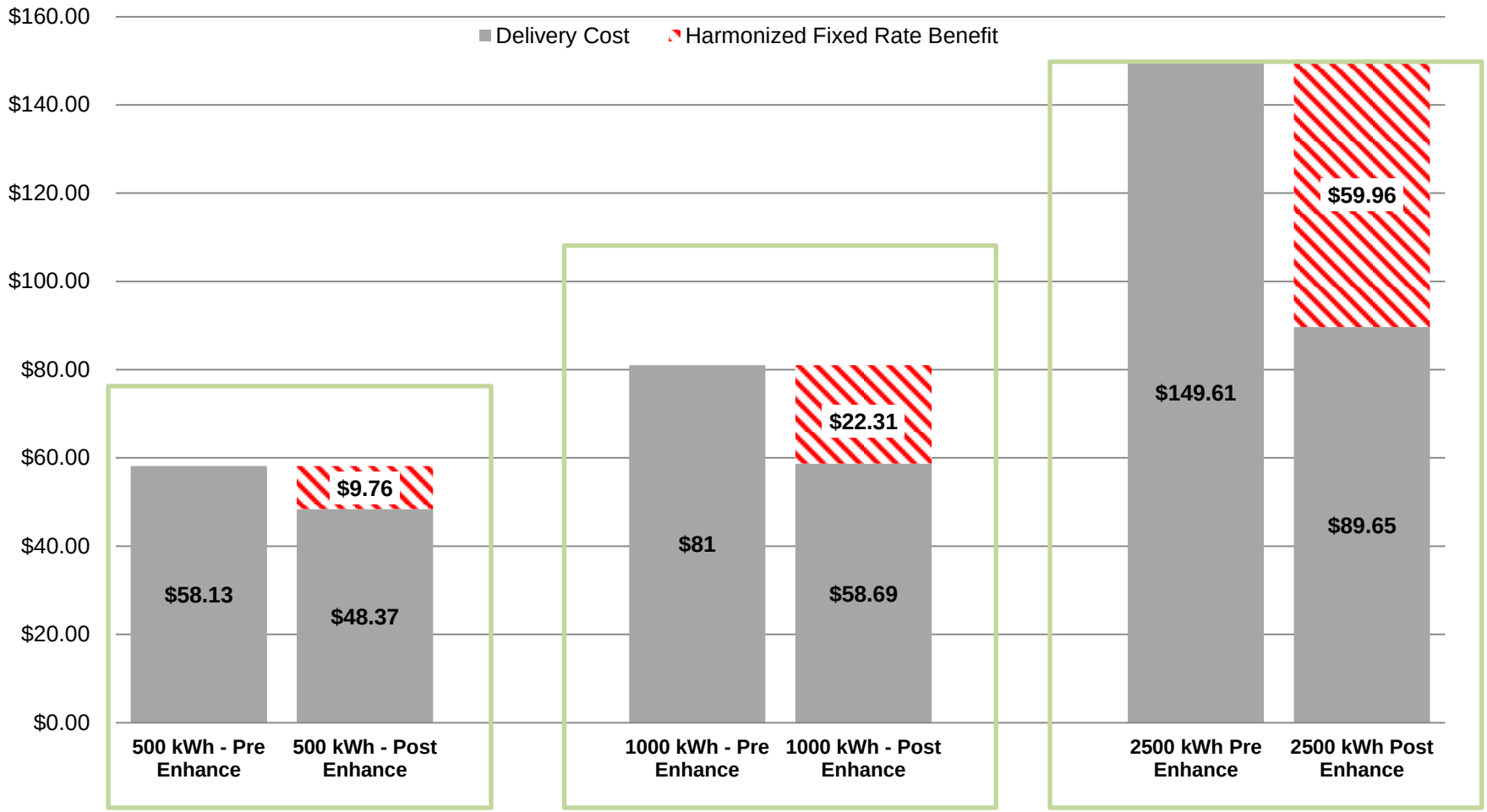
A. Harmonized Distribution Cost – Delivery Line Impact (Algoma Power)



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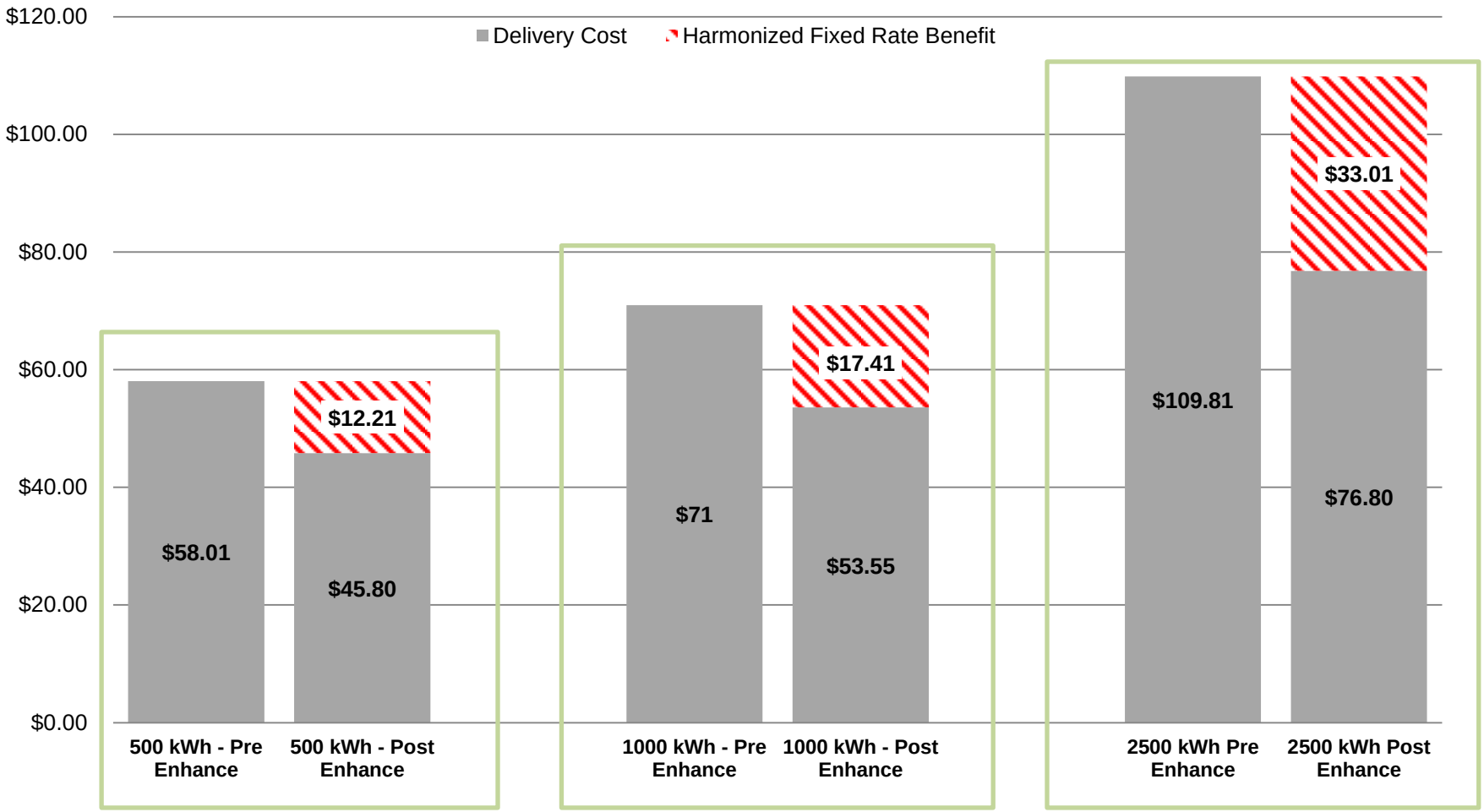
Note: *Rates are for 2017 (either approved or proposed).*
Algoma Power receives RRRP to support operational costs.

A. Harmonized Distribution Cost – Delivery Line Impact (Atikokan Hydro)



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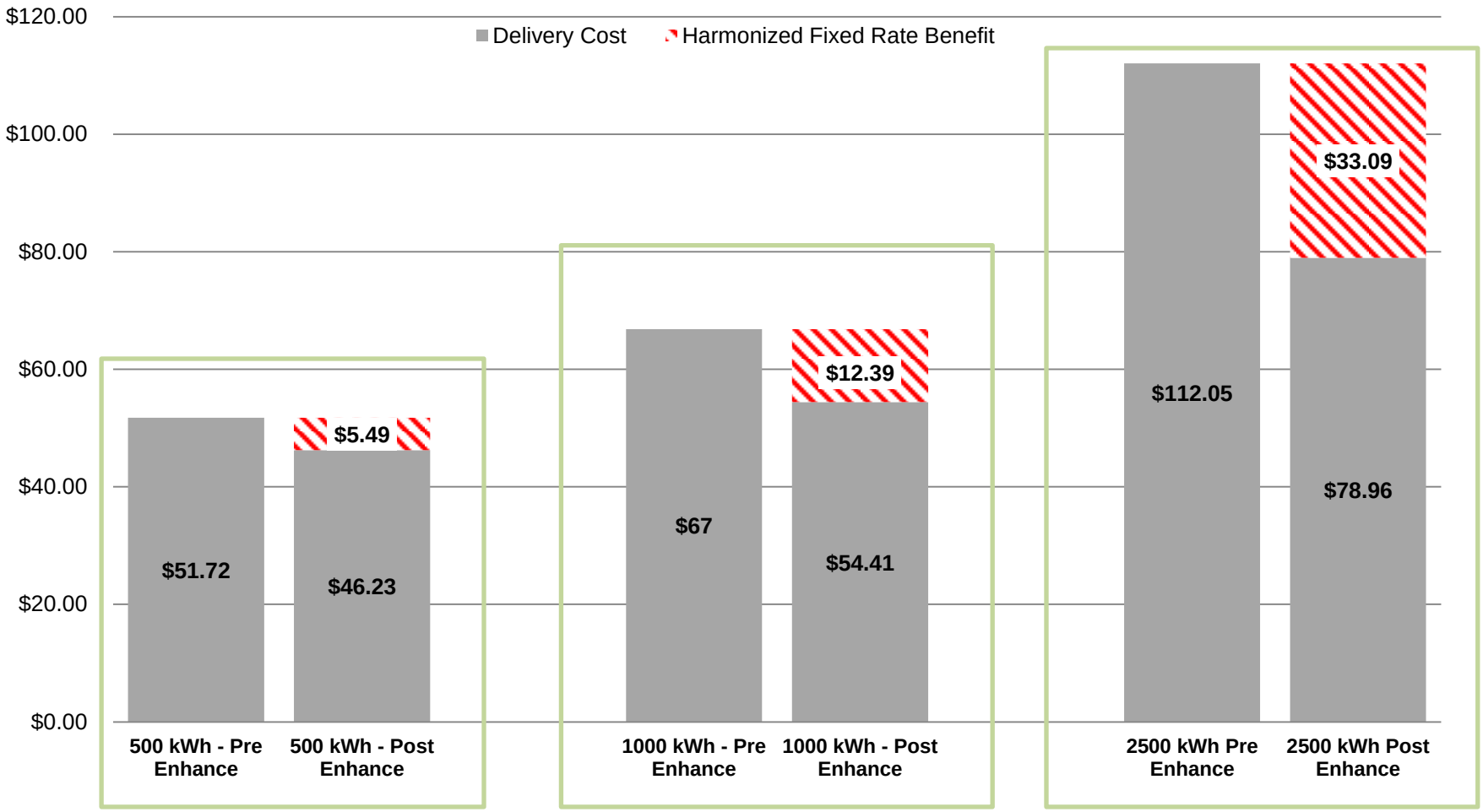
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (InnPower)



Note: *Rates are for 2017 (either approved or proposed)*

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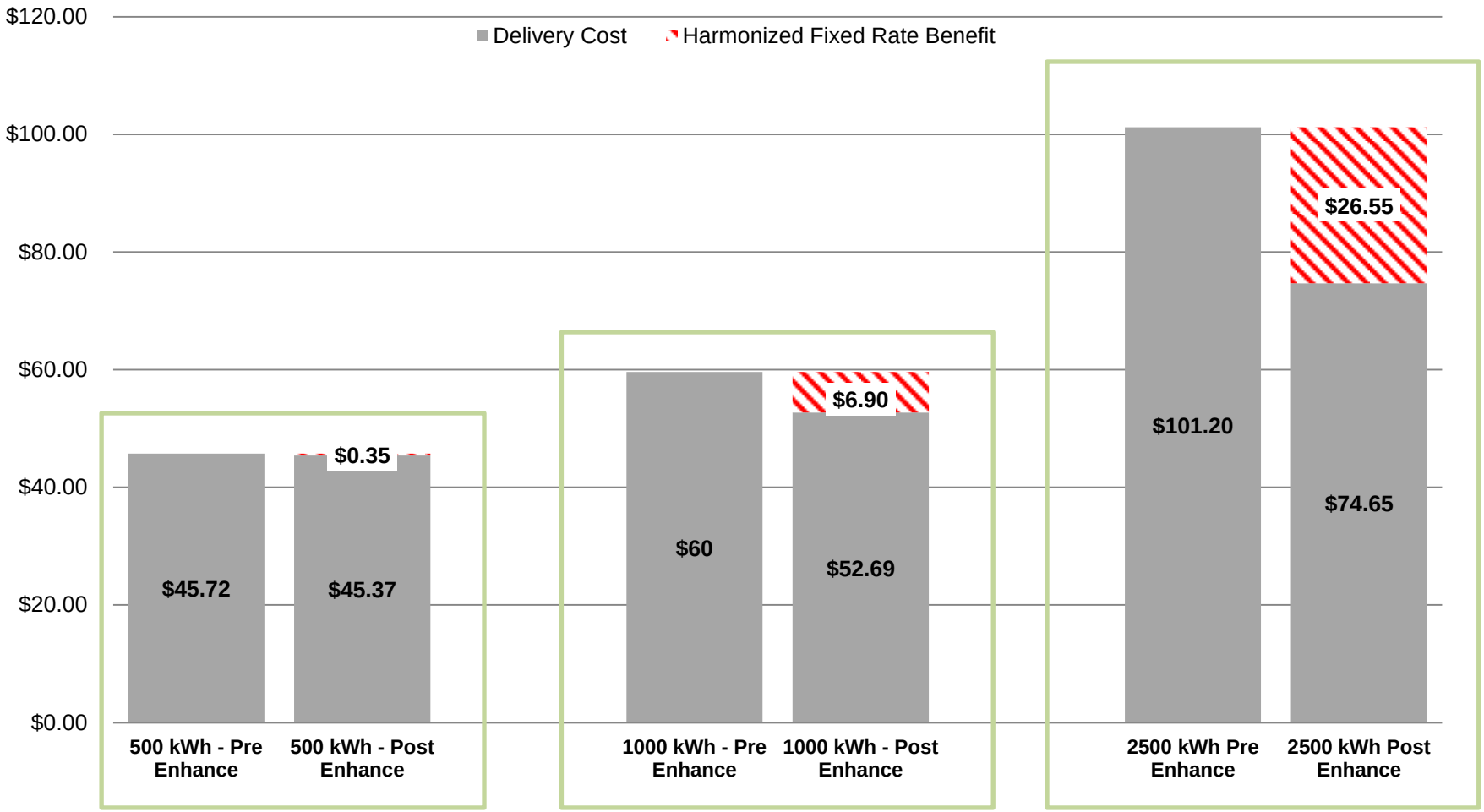
A. Harmonized Distribution Cost – Delivery Line Impact (Chapleau PUC)



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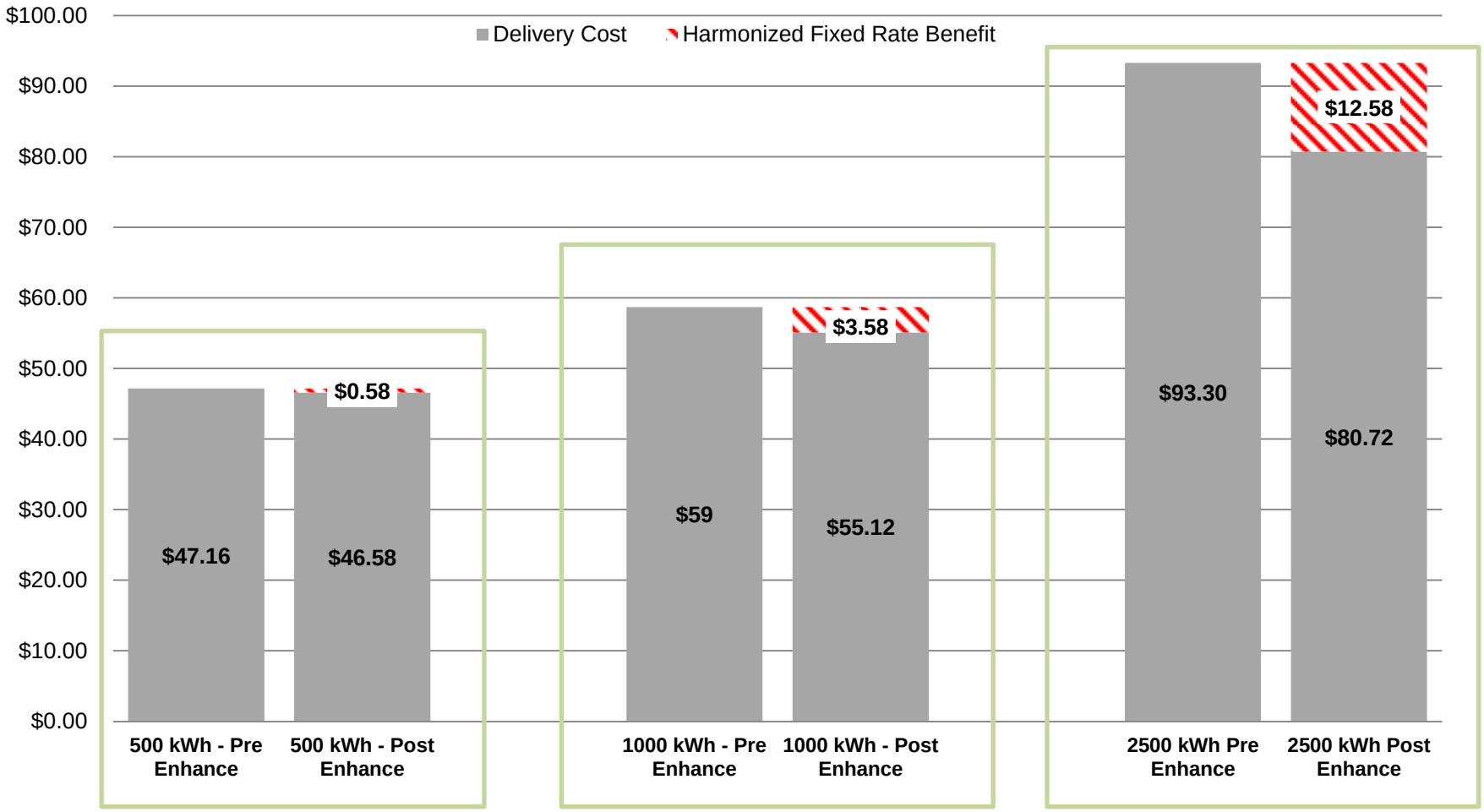
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Sioux Lookout Hydro)



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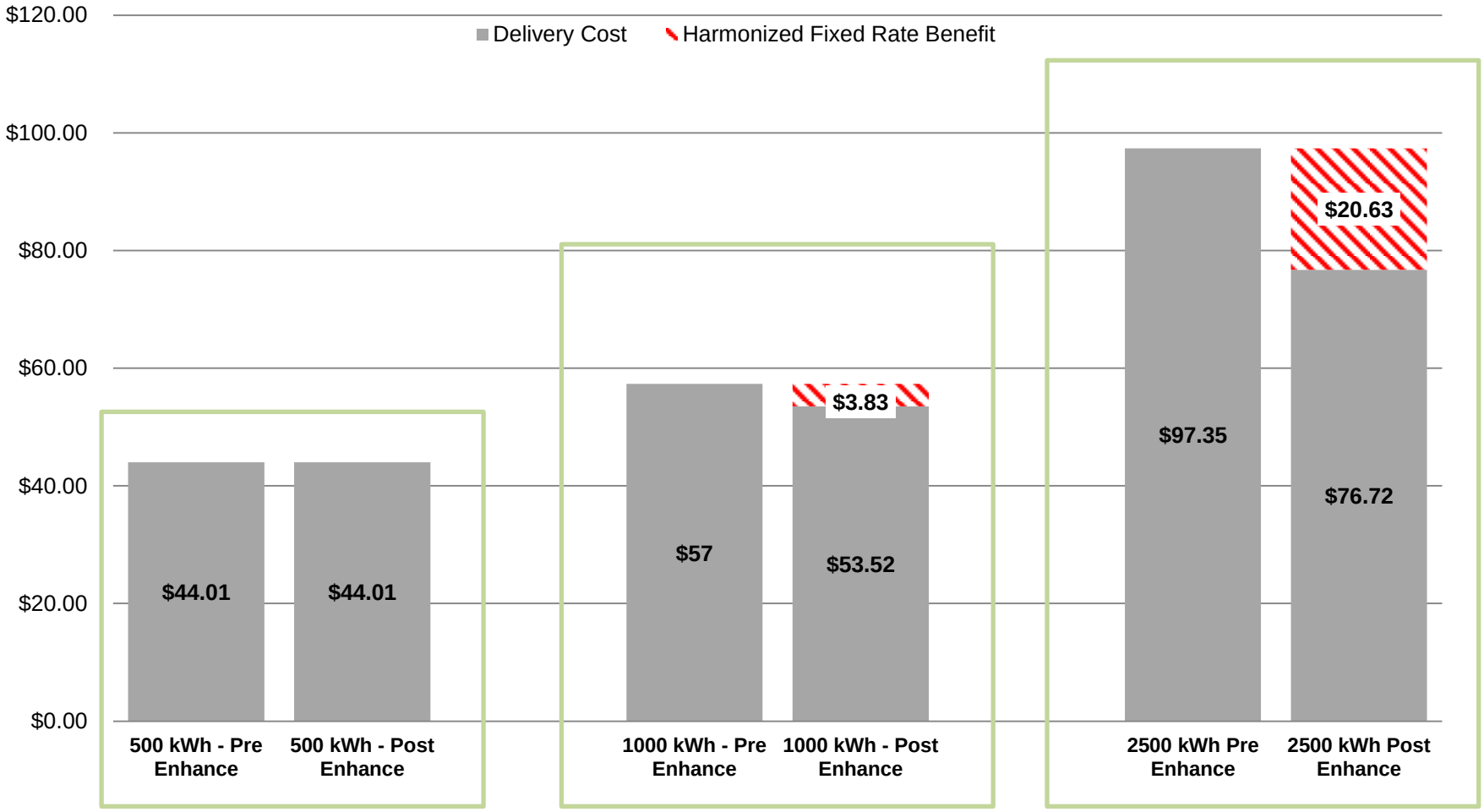
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Lakeland Power – Parry Sound)



Note: *Rates are for 2017 (either approved or proposed). Rates are for the Parry Sound territory within Lakeland Power. Other Lakeland Power customers (Huntsville area) not impacted.*

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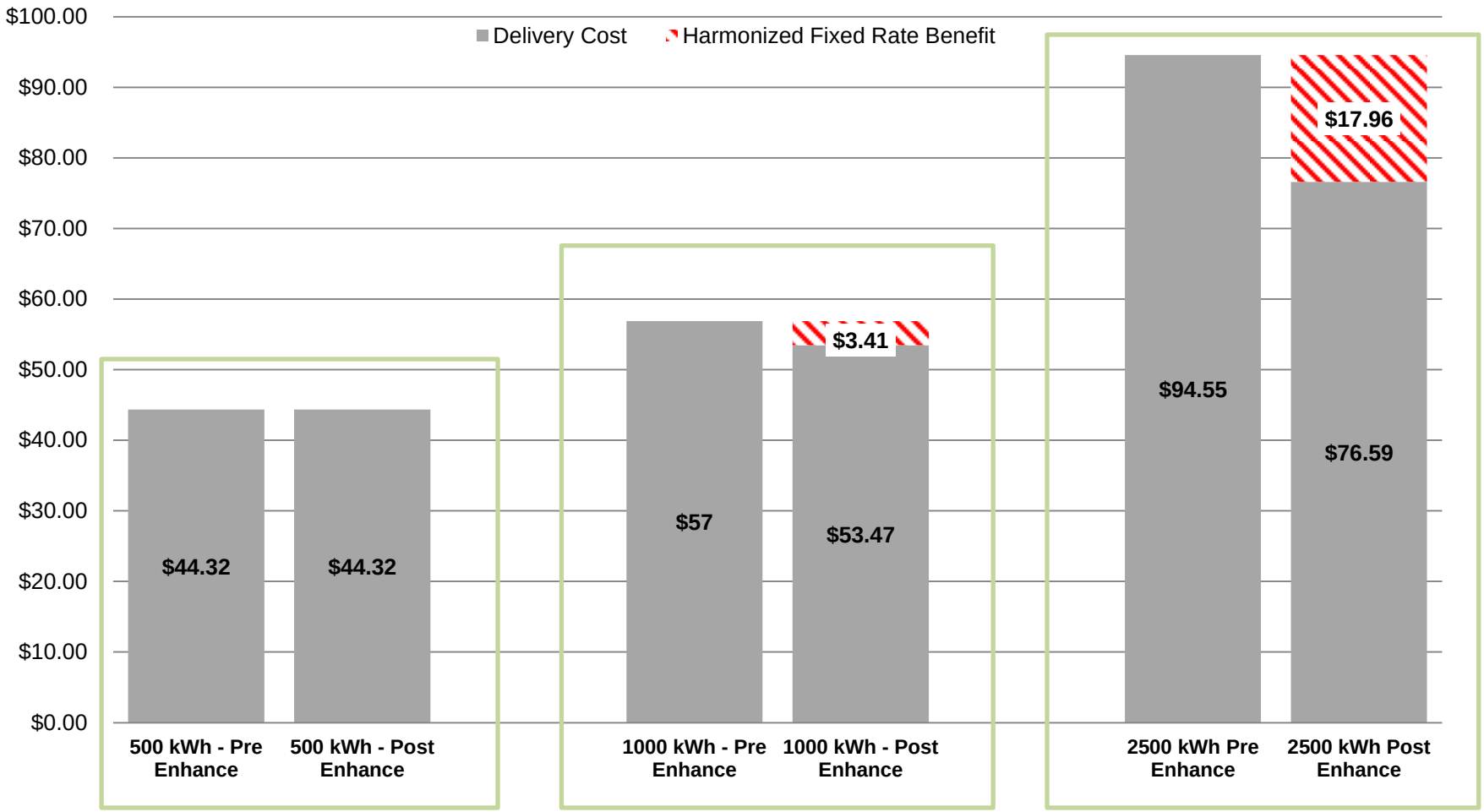
A. Harmonized Distribution Cost – Delivery Line Impact (Northern Ontario Wires Inc.)



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Note: *Rates are for 2017 (either approved or proposed)*

A. RRRP Enhancement – Considerations

Implementation

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
  - LDCs may need to be named explicitly in the legislation/regulation
  - A mechanism would also need to be created to ensure the level of benefit changes year to year
- LDCs will need to change their billing and customer information systems. OEB estimates that the implementation would take at least 6 months or more, following finalized regulations
- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis
  - Some options may impact OEB rate-setting processes and create disincentives towards Hydro One productivity and performance improvements.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.
- A mechanism will need to be created to ensure that LDCs/OEB/IESO/Province are aligned in the year-to-year forecasting and costing of the RRRP program and the enhancements.

A. RRRP Enhancement – Considerations (cont'd)

Fiscal

- As distribution costs vary year to year, forecasting fiscal impacts are challenging:
  - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate which could have a significant impact on fiscal requirements and ratepayer impacts.
  - The other high distribution cost LDCs generally have lower distribution cost increases, however, it is difficult to forecast fiscally the impact of the program until LDCs submit their cost of service applications to the Ontario Energy Board.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
TOTAL	**-**	**454**	**450**	**446**	**444**

Note: Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

B. Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application based program that lowers electricity costs of the most vulnerable consumers by a rebate directly on bills. The OESP is currently funded by the rate base.
- OESP benefits vary by income level and family size, and there are two benefit scales that include:
  - The basic program credit ranges from $30/month to $50/month.
  - An enhanced credit that ranges from $45/month to $75/month for consumers that are either Indigenous, use electric heat or have certain medical devices.
- The OESP launched on January 1, 2016, and in just over a year:
  - Almost 180,000 have been enrolled in the program representing 30% of the total targeted low-income population and some 278,000 applications have been received.
  - Almost $50 million in benefits have been provided to vulnerable consumers.
  - Some 172 intake agencies have been mobilized to assist low income consumers to apply for the OESP.
- To drive this uptake, the OEB has engaged in extensive outreach, including advertising in multiple languages, and continuing to work with partner agencies to develop a model for “application clinics” across the province to increase program awareness and uptake across the province.

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B. Ontario Electricity Support Program (OESP) (cont'd)

- There are a numbers of ways that the OESP program can be enhanced, including:
  - Working to get the OESP participation as close as possible to 100%:
    - Streamlining the application process to make it easier / quicker to get through (e.g., an alternative to the requirement to mail-in signed consent forms);
    - Putting in place a more aggressive communications strategy to make sure vulnerable communities are aware of the program; and
    - Exploring automatic OESP qualification for those who receive provincial programs (e.g., OW, ODSP).
  - Increasing the existing benefit scales by an additional 50% and expanding who benefits are provided to (see the following slide for details on what this enhancement would do).
- It is also recommended that the OESP be enhanced and also supported from the tax-base as part of the rate mitigation package.

B. Ontario Electricity Support Program (OESP) (cont'd)

- The tables below outline the existing OESP benefit scales and how the scales would be enhanced if increased by 50% and benefits are extended to additional groups (represented in the circled boxes):

Existing OESP Benefit Scales

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$30	$30	$34	$38	$42	$50	$50
	$28,001 - $39,000	-	-	$30	$34	$38	$42	$50
	$39,001 - $48,000	-	-	-	-	$30	$34	$38
	$48,001 - $52,000	-	-	-	-	-	-	$30

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$50	$55	$60	$75	$75
	$28,001 - $39,000	-	-	$45	$50	$55	$60	$75
	$39,001 - $48,000	-	-	-	-	$45	$50	$55
	$48,001 - $52,000	-	-	-	-	-	-	$45

Proposed +50% OESP Benefit Increase*

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$51	$57	$63	$75	$75
	$28,001 - $39,000	-	$40	$45	$51	$57	$63	$75
	$39,001 - $48,000	-	-	$35	$40	$45	$51	$57
	$48,001 - $52,000	-	-	-	-	$35	$40	$45

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$68	$68	$75	$83	$90	$113	$113
	$28,001 - $39,000	-	$60	$68	$75	$83	$90	$113
	$39,001 - $48,000	-	-	$52	$60	$68	$75	$83
	$48,001 - $52,000	-	-	-	-	$52	$60	$68

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***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

B. Ontario Electricity Support Program (OESP) – Considerations

Fiscal Impact

- Changes to legislation / regulation may be required to establish and define the parameters for OESP to receive funding from the tax-bas. The scope of changes would depend on the implementation / delivery mechanisms.
- Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.
- If OESP amounts are increased, it will need to be confirmed that the credit is not treated as taxable income. This was addressed in the current iteration of the OESP.
- Adding additional categories to the OESP matrix require will take time to implement as it will require changes to the central system as well as LDCs' billing systems. As well, the matrix will no longer follow the Low Income Measure (LIM), which could put additional pressure on the OESP and other provincial programs.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be).	-	178	239	290	334

C. Establishing a New LDC Affordability Fund

- For eligible low-income customers, the Home Assistance Program (HAP), delivered by LDCs under the Conservation First Framework, provides efficiency upgrades and education, at no cost, to help improve the energy efficiency and comfort of their homes and help customers manage their electricity bills.

- HAP does not address the needs of those customers that do not qualify as "low-income" but could benefit from conservation programs.
  - At the end of 2015, there were over 560,000***** residential electricity accounts in arrears; of these about 19,900****** (~3.6%) accounts were eligible to participate in low-income conservation and support programs.
  - According to the Ontario Energy Board (OEB), in 2015 about 60,000 customers had their electricity service disconnected.

Proposal: Establish Affordability Fund to Provide Existing Low-Income Conservation Program to Other Electricity Customers

- The Ministry proposes establishing an Affordability Fund which would be available to LDCs to provide similar energy efficiency measures as provided under HAP to targeted customers.
- The Affordability Fund would not be used to provide grants or financial assistance to customers to forgive all or a portion of their arrears or electricity bill.

*** Note:** Unverified numbers reported by LDCs to the OEB
**** Note:** Low-income customers identified through participation in LEAP

C. Establishing a New LDC Affordability Fund (cont'd)

Fund Details:

- An Affordability Fund would be accessible to LDCs only, and would target those customers who are most in need, such as those who are facing disconnection and who cannot qualify for the low-income programs.
  - By providing support for energy efficiency improvements, the Fund could help these customers reduce their future bills and avoid future disconnections.
  - The Fund would provide LDCs with an additional tool to provide assistance to their customers.

Eligibility Criteria/Fund Principles:

- Determination of eligibility could involve a number of factors and metrics:
  - Do not meet the definition of "low-income";
  - May have triggered action by an LDC collection department (e.g., are in arrears, have been placed on one or more payment plans, are due to be disconnected, etc.);
  - Priority could be given to eligible customers in electrically-heated homes, or other unique circumstances; and
  - Require financial assistance to pay for energy efficiency measures.

C. Establishing a New LDC Affordability Fund (cont'd)

Implementation

- ENERGY is currently in discussions with several large LDCs to determine the feasibility of establishing a Fund and to identify a willing LDC(s) to administer the funds.
  - LDCs have over 10 years of experience in delivering conservation programs, including experience specific to contracting for programs that target low-income customers.
  - LDCs are best positioned to identify and target their customers who are most in need.

- Given the scope of the Fund, an LDC would need a firm financial commitment up front before implementation. LDCs rely on rate-payer funding for most of their activities. The Affordability Fund would be a unique venture from an LDC perspective given that it is tax funded.

- LDCs would apply for funding to the Fund administrator, to offer energy efficiency measures to those customers that meet the targeted eligibility criteria.
  - Recipients could receive measures ranging from $3,000 to $5,000 per customer, at no or minimal cost. For example, measures available in the Home Assistance Program include:
    - Energy-saving light bulbs (LEDs); power bars; energy efficient window ACs, refrigerators, freezers, dehumidifiers; low-flow showerheads, hot water blankets, pipe wrap and faucet aerators (in homes with electric water heating); and
    - Programmable thermostats, weather stripping, insulation (in homes with electric heating).
  - Consideration could also be given to including cold climate air source heat pumps for electrically heated homes, which can range in cost from $7,000 to $13,000.
  - As an illustration, with $200 million, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

C. Establishing a New LDC Affordability Fund – Considerations

Considerations

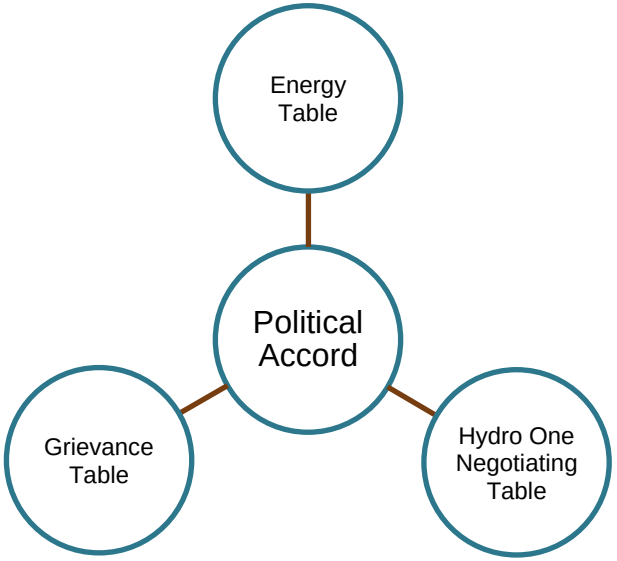
- The LDC Affordability Fund addresses a real need.
  - LDCs have expressed the need for an additional tool to provide assistance to their customers.
- Determining allocation of funds to LDCs:
  - Some LDCs may have a disproportionate number of customers in need of assistance; and
  - ENERGY is proposing to establish a Working Group, including the OEB, LDCs and potentially low income organizations to help develop funding criteria and allocation.
- LDCs need flexibility to target customers:
  - Not all customers who are in need will actively seek help;
  - Some customers in arrears may be "gaming the system" and not truly in need; and
  - LDCs recommend targeted outreach as opposed to broad marketing; a high volume of applications would limit the ability to deliver assistance to customers who need it most.

Fiscal Impact

- The LDC Affordability Fund would represent a fiscal impact of $200 million in fiscal year (FY) 2016/17.
- To allow for funds to flow in FY 2016/17, ENERGY would sign a Transfer Payment Agreement (TPA) with one or several LDCs to administer the Fund and transfer money before end of fiscal year.
- There is a fiscal risk if monies used for the Fund do not flow before FY year-end 2016/17 and for monies that are sitting in Hydro One at year-end (because of consolidation with province), and a corresponding fiscal pressure in the following years when the funds are flowed from Hydro One (H1) to ratepayers.

D. Implementing On-Reserve First Nations Delivery Credit

- ENERGY has a number of Tables with the Chiefs of Ontario (COO) and First Nations that include the Energy Table to discuss policy issues, the Hydro One Negotiating Table to discuss Hydro One shares, and the Grievance Table.
- The Grievance Table process was established at the request of COO as a means to avoid litigation to resolve historic grievances related to the energy sector and prevent these issues from impeding progress on broadening the ownership of Hydro One (H1).
- The cost of electricity and delivery charges were identified as the prevailing grievance at the First Nations-Ontario Energy Table meeting in Timmins in 2016, and the Minister of Energy agreed to explore options for a First Nations Rate through the Grievance Table process.



- In June 2016, following discussions on Hydro One shares and rates at COO's All Chiefs Conference, the Minister of Energy issued a letter directing the OEB to prepare a report providing "*advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers*".
  - OEB engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network. It also established an Advisory Committee with the Chiefs of Ontario's Grievance Committee.
- The Ontario Energy Board (OEB) has worked with COO to engage with First Nations to develop options for a First Nations electricity rate. The OEB provided a report to the Minister on December 29, 2016.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve. These challenges result in significantly higher electricity consumption levels and costs.
- First Nations living on reserve are particularly vulnerable low-income consumers: the average income is considerably lower compared to First Nations living off reserve and compared to non-Indigenous populations:
  - Average income of First Nations on reserve in Ontario: $21,100;
  - Average income of First Nations off reserve in Ontario: $31,527;
  - Average income of Non-Indigenous people in Ontario: $42,506; and
  - Median incomes on smaller reserves can fall below $10,000 (e.g., Cat Lake FN).
- Employment rates also differ between on-reserve First Nations, off-reserve First Nations and Non-Indigenous individuals, as well as other indices of social vulnerability:
  - 54% of Indigenous people over 15 years old and living on-reserve in Ontario are unemployed or not in the labour force;
  - The on-reserve unemployment rate is 18.3% compared to 6.4% in Ontario generally; and
  - 67% of families residing on-reserve are single parent families, compared to the Canadian equivalent of 19%.
- First Nations are seeking redress for historic grievances related to lands affected by energy developments, such as transmission or distribution infrastructure built on reserve lands and traditional territories where, in some cases, they may not have been appropriately consulted.
- Further, in some circumstances, linear infrastructure corridors cut First Nation reserves in half, significantly disturbing the use and management of an already small land base; the First Nation communities disturbed by the energy infrastructure report having experienced long wait times (e.g., 20 years) for their communities to get connected and receive the benefits of the energy derived from the local infrastructure.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
  - Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate;
    - The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of $13 to $20 million or 11 cents a month for a typical residential electricity consumer.
  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
  - Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.

- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.

- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

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- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

Distributor	Number of On-Reserve Residential Customers
Algoma Power Inc.	473
Attawapiskat Power Corporation	336
Bluewater Power Distribution Corporation	237
Cat Lake Power Utility Ltd.	80
Cornwall Electric Distribution	514
Hydro One Networks Inc.	16,679
Hydro One Remote Communities Inc.	2,579
PUC Distribution Inc. (Sault Ste. Marie)	264
Thunder Bay Hydro Electricity Distribution	332
Total Number of Customers	**21,494**

Source: OEB Report to Minister: Options for an Appropriate Rate Assistance Program for On-Reserve First Nations Electricity Consumers (Page 5).

D. Implementing On-Reserve First Nations Delivery Credit – Considerations

- Legislative and regulatory will be required to implement this program.
- The OEB will need to work with the LDCs to identify on-reserve consumers to administer the delivery rebate.
- Development of a communications plan containing the following elements:
  - Public release of the OEB report;
  - Commitment to working with LDCs on implementation details; and
  - Advanced notice to the OEB and COO regarding the ministry's decision to move forward on the OEB's recommendation and indicate a willingness to work collaboratively with COO on ways in improve community-LDC communication to ease implementation.
- The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- Recipients would continue to be eligible for programs such as the Ontario Electricity Support Program (OESP) and the Low-Income Electricity Assistance Program (LEAP).
- There is a risk that either non-status Indigenous communities without reserves or Métis could challenge the program on the grounds that it discriminates against them contrary to section 15 of the Charter. This risk is mitigated by the ameliorative purpose of the program and because targeting First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities. A genuinely ameliorative program that targets some people but excludes others is shielded from a s. 15 challenge if it serves or advances the ameliorative goal.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
On-Reserve First Nation Delivery Credit	-	20	20	20	20

Fiscal Roll-Up

Fiscal Impact ($M)*	16-17	17-18	18-19	19-20	20-21
RRRP Enhancements**	-	454	450	446	444
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be)	-	178	239	290	334
On-Reserve First Nation Delivery Credit	-	20	20	20	20
LDC Affordability Fund***	200	-	-	-	-
Total	200	652	709	756	798

***Note:** GA Smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met. See GA Smoothing – Fiscal Considerations for fiscal impact of GA smoothing if legal and accounting treatment not met.

****Note: Note:** Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

*****Note:** Funding for the LDC Affordability Fund is one-time in 2016/17.

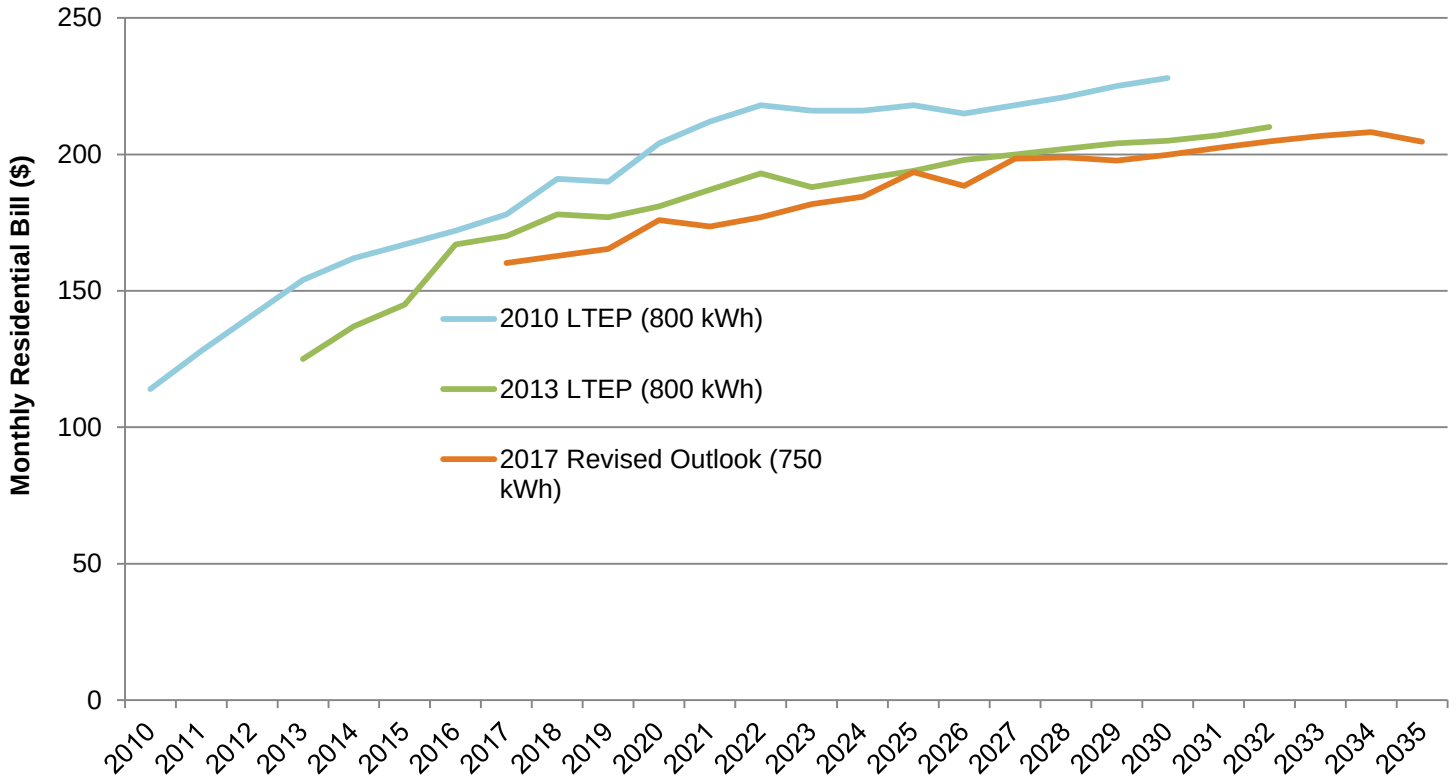
BENDING THE FUTURE COST CURVE OF ELECTRICITY

Existing Rate Mitigation Actions To Bend The Cost Curve

- Since 2013, the government has taken a number of actions to reduce electricity ratepayer costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.
  - Suspending the second round of the LRP process and the Energy-from-Waste Standard Offer Program, which is expected to save up to $3.8 billion in costs.

Existing Rate Mitigation Actions To Bend The Cost Curve (cont'd)

- The chart below shows how electricity rate forecasts have trended down over time.



Sources: *2010 LTEP (800 kWh/month); 2013 LTEP (800 kWh/month); Revised Ontario Planning Outlook (750 kWh/month as of December 2016) which includes: ICI expansion, RRRP update, 8% rebate, HQ agreement, suspension of LRP II and EFWSOP.*

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A. OEB – LDC Efficiencies and Rates

Leveraging the OEB

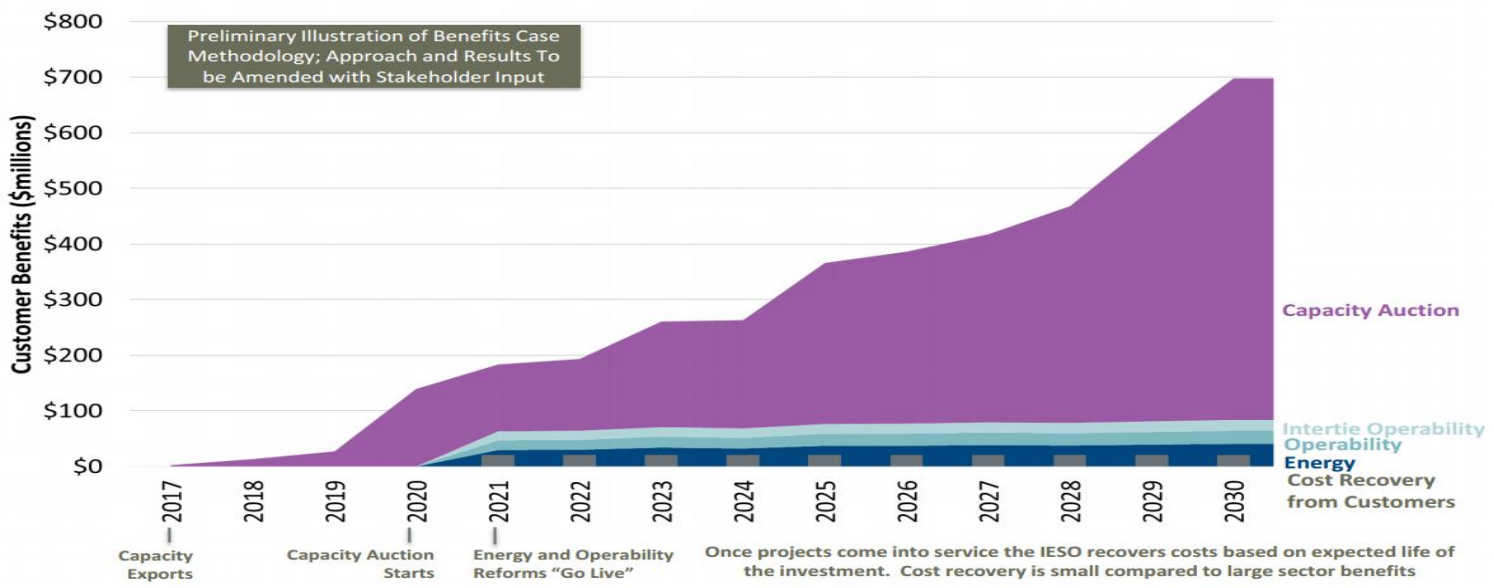
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- The OEB, through the Renewed Regulatory Framework for Energy (RRFE), has since 2012 attempted to move the distribution sector towards a performance/outcomes-based regulatory framework.
  - While new reporting requirements such as the LDC performance scorecard are positive developments, RRFE does not tie these system performance expectations to LDC financial performance.
- Encouraging shared partnerships on services between utilities will help reduce costs in the back end and encourage further innovation for small to medium sized utilities.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to make recommendations about how the distribution sector could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities.

Opportunities

- ENERGY could help promote and accelerate these efforts by asking the OEB to look at opportunities to further drive LDC efficiencies and productivity. This may indirectly incent LDC consolidation.
- In parallel, the OEB could be instructed to review business cases behind its own regulatory requirements to reduce “red tape” and eliminate costs that LDCs indicate are creating pressures on operating expenses.
- This could be done through the Minister's letter, the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes.

B. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.



GLOBAL ADJUSTMENT (GA) SMOOTHING

Overview – GA Smoothing

- The Global Adjustment (GA) has risen over the past decade as the province's electricity system has decarbonized.
  - The vast majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing, and fixed operations costs. The GA recovers these fixed costs of running the province's generation fleet, as well as the cost of conservation programs.
- The majority of the province's electricity generators are under 20-year contracts and account for less than half of the GA. Some of these generators will continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years).
  - There is an opportunity to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs.
  - GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief (i.e., similar to re-financing a mortgage). By recognizing that generation assets are expected to continue to provide residual benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.
- The GA Smoothing options under consideration are illustrative and show potential rate mitigation measures to meet a targeted 25%, 20% and 18% reduction from the projected residential bill in 2017.
  - These residential impacts are based on a forecast for a household connected to Toronto Hydro that consumes 750 kWh per month.
  - Actual ratepayer savings would vary due to differences in consumption patterns.
  - Targeted to residential and small business customers (RPP).

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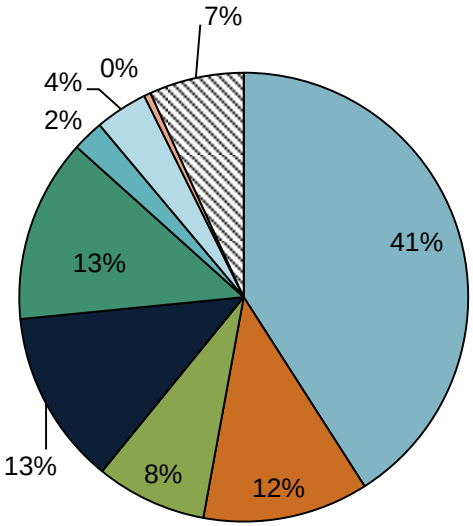
GA Smoothing – Cost Breakout

- The Global Adjustment (GA) accounts for the fixed costs, including capital costs, of running Ontario's generation fleet, as well as the cost of conservation programs. The GA is instrumental in maintaining a reliable electricity system by ensuring that sufficient generating capacity is available.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing and fixed operations costs. Most generators are on 20-year contracts with the exception of hydroelectric and nuclear plants. They operate on longer contracts (or are regulated on a cost-of-service basis by the OEB) in recognition of the much longer operating lives of these facilities.
- Chart below shows the breakout of the GA by generator and program types. In 2016, the GA costs were $12.3 billion. These costs will evolve over time as 2,181 MW of previously contracted generation comes online in the coming years.

2016 GA Cost: $12.3 billion



	GA ($M)
Nuclear	5,053
Hydro	1,473
Natural Gas	985
Wind	1,552
Solar	1,630
Biomass, Landfill and Byproduct	278
Conservation	467
IEI Program	60
OEFC*	842

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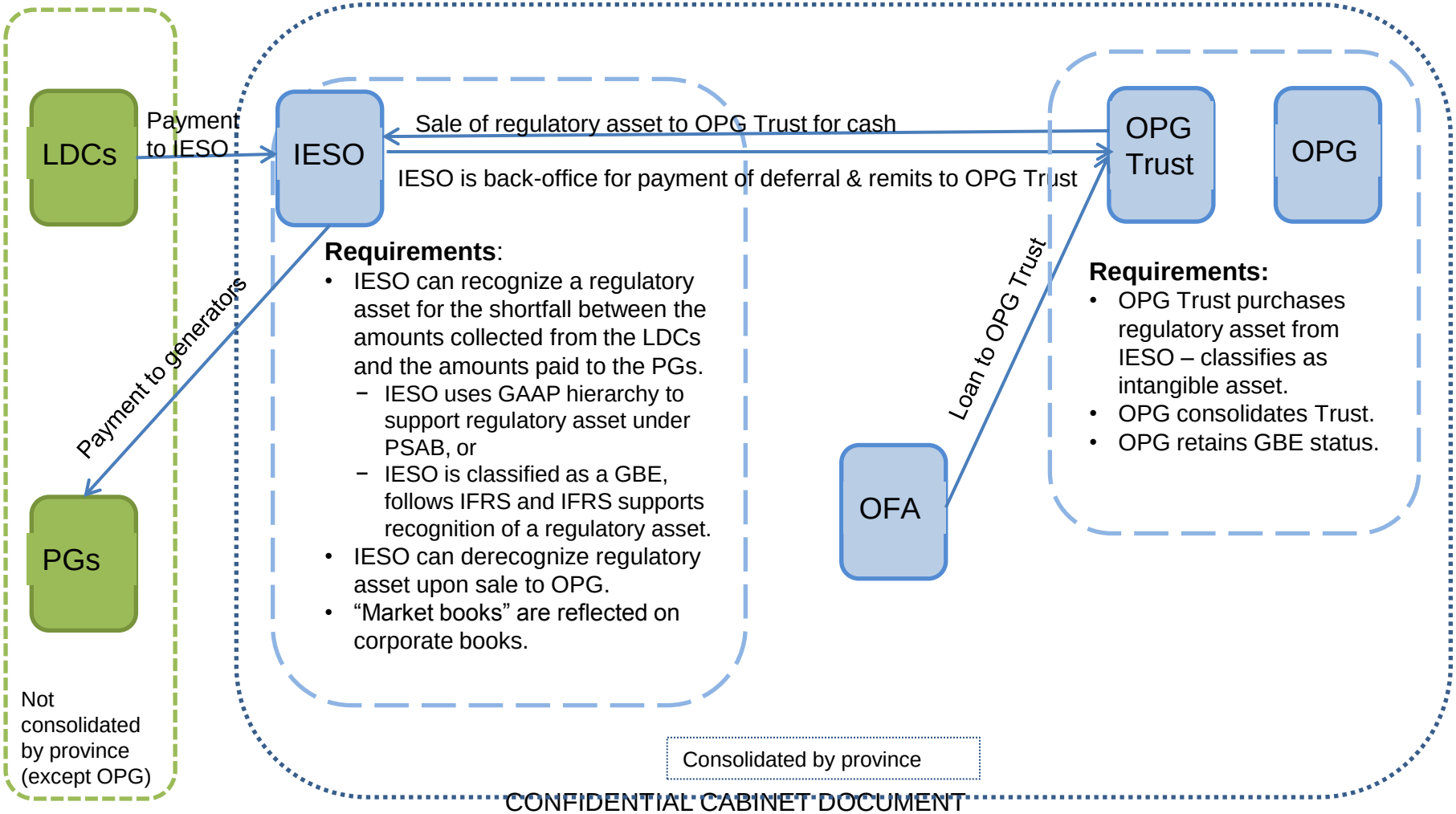
***Note:** OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.

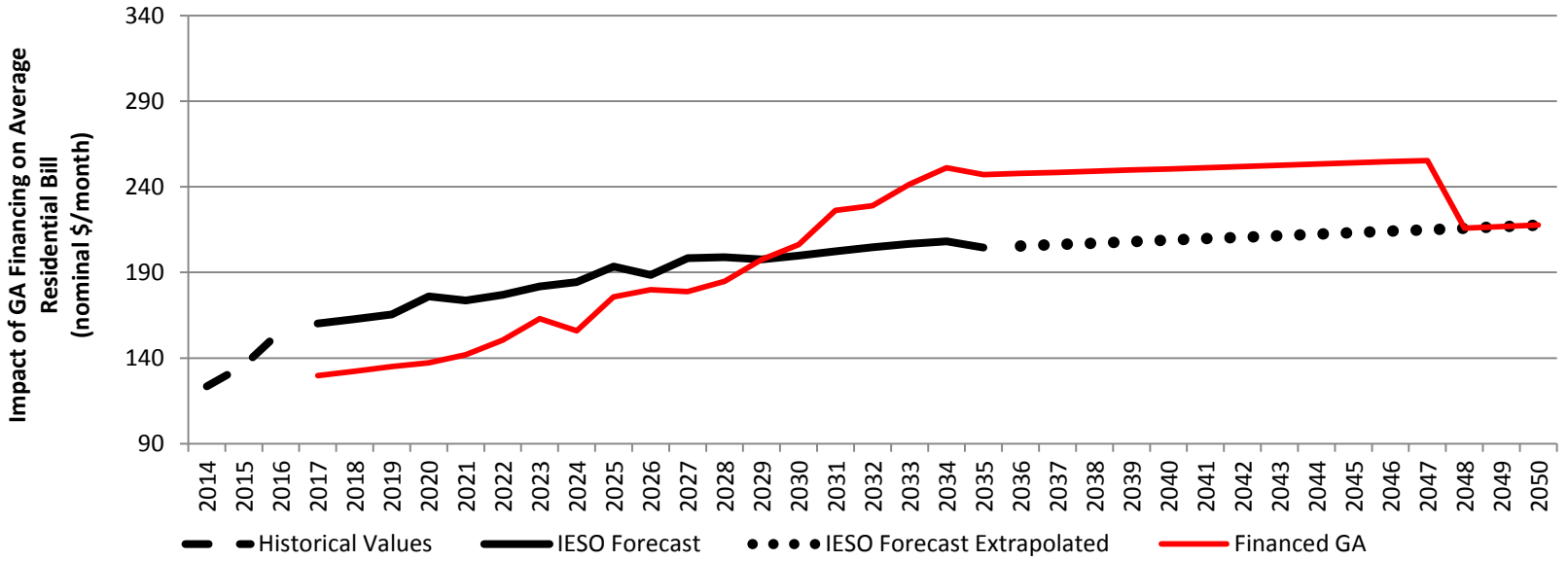
**** Note:** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

A. GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



B. Option 1: GA Smoothing for RPP Only (Borrow $2.2 billion in 2017, Residential Bills Lowered 25%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-27.0	-26.9	-26.9	-34.3	-28.1	-23.5	-16.6	-25.2	-15.7	-7.5	-17.4	-12.4	-0.1	5.7	21.1	21.4	30.7	38.1	37.6	37.5	37.3	37.2	37.0	36.8	36.7	36.5	36.4	36.2	36.1	35.9	35.8	0.0
Total Accumulated Debt *($ billion)*	2.2	4.6	7.0	10.2	13.1	15.7	17.8	20.8	23.2	25.0	27.7	30.1	31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6	24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8	6.0	3.1	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.2	2.3	2.4	3.2	2.8	2.6	2.2	3.0	2.4	1.8	2.7	2.4	1.6	1.1	-0.1	-0.1	-0.9	-1.6	-1.7	-1.8	-1.9	-2.0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.1	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.2 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 1: GA Smoothing for RPP Only – Residential Bills Lowered 25% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

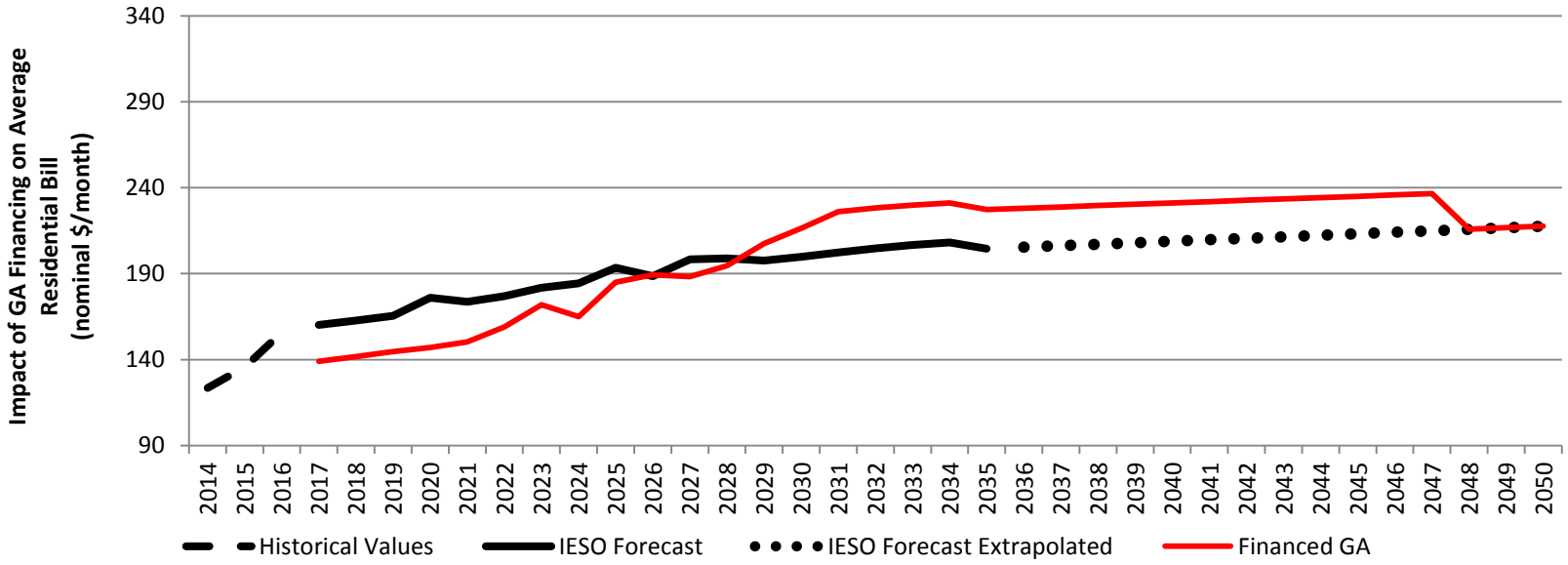
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-27	-27	-27	-34	-29
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		123	126	128	131	133
8% rebate		-10	-10	-10	-10	-11
HST		16	16	17	17	17
Revised Bill (includes HST)	**163**	**129**	**132**	**135**	**137**	**140**
Year-over-Year Change		-21%	2%	2%	2%	2%
Change from Forecast		**-25%**	**-25%**	**-24%**	**-28%**	**-25%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.5	-15.8	-8.8	-17.2	-7.5	0.9	-8.9	-3.7	8.7	14.7	20.9	20.7	20.6	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.7	19.6	19.5	19.4	19.3	19.3	19.2	0.0
Total Accumulated Debt *($ billion)*	1.6	3.2	4.9	7.2	9.3	11.0	12.3	14.4	15.7	16.5	18.0	19.3	19.5	19.3	18.6	17.8	17.0	16.1	15.2	14.3	13.3	12.2	11.1	10.0	8.7	7.5	6.1	4.7	3.2	1.6	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	1.6	1.6	1.7	2.4	2.1	1.8	1.3	2.0	1.4	0.7	1.6	1.2	0.3	-0.2	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-1.6	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $1.7 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

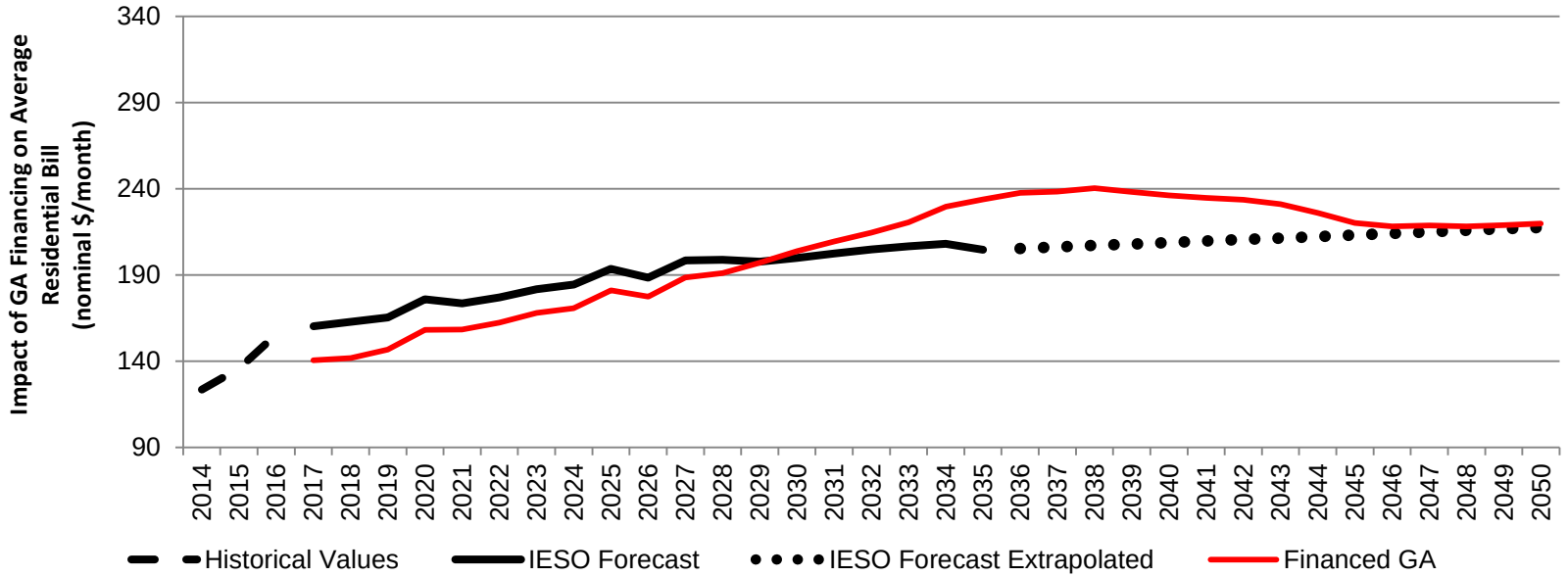
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 3: GA Smoothing for RPP Only (Borrow $1.4 billion in 2017, Residential Bills Lowered 18%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-17.5	-18.5	-16.6	-15.7	-13.5	-12.9	-12.2	-12.2	-11.0	-9.7	-8.8	-6.9	-0.6	3.4	6.2	8.6	12.2	19.0	25.8	28.4	28.4	29.5	26.8	24.2	22.2	20.4	17.3	12.2	6.2	3.7	3.3	2.0
Total Accumulated Debt *($ billion)*	1.4	3.1	4.6	6.1	7.5	9.0	10.4	12.0	13.5	15.0	16.5	17.9	18.8	19.5	20.0	20.3	20.3	19.8	18.5	17.0	15.5	13.7	12.1	10.6	9.1	7.8	6.7	5.9	5.7	5.6	5.6	5.7
Total Change in Accumulated Debt *($ billion)*	1.4	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.0	0.7	0.5	0.3	0.0	-0.6	-1.2	-1.5	-1.6	-1.8	-1.6	-1.5	-1.4	-1.3	-1.1	-0.7	-0.3	-0.0	-0.0	0.1

Notes: Assumes financing of all non-nuclear IESO contracts for an additional 10 years beyond the life of each contract and 15 year financing of the conservation cost in any given year. Assumes a a nominal interest rate of 5% (compounded monthly). IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

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B. Option 3: GA Smoothing for RPP Only – Residential Bills Lowered 18% (with Tax-Base Funded 8% Rebate and Social Programs)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-17	-18	-17	-16	-13
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		134	135	139	149	149
8% rebate		-11	-11	-11	-12	-12
HST		17	17	18	19	19
Revised Bill (includes HST)	**163**	**140**	**141**	**146**	**157**	**156**
Year-over-Year Change		-14%	1%	4%	7%	-1%
Change from Forecast		-18%	-19%	-18%	-17%	-17%

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

GA Smoothing – Accounting Considerations

- Analysis is not complete; several requirements (below) are high risk re: satisfactory resolution.
- Complexity of the structure, including the number of entities involved increases risk in and of itself.
- If all requirements can be met, an accounting analysis can be supported that results in: (1) no fiscal impact; and (2) no increase in net debt.
- IESO requirements – IESO mgmt, KPMG (Energy advisor and IESO auditor), OPCD and EY (OPCD advisor) are evaluating accounting risks:
  - IESO can recognize a regulatory asset for the shortfall between the amounts collected from the LDCs and the amounts paid to the PGs;
    - IESO uses GAAP hierarchy to support regulatory asset under PSAB; or
    - IESO is classified as a GBE, follows IFRS and IFRS supports recognition of a regulatory asset.
  - IESO can derecognize regulatory asset upon sale to OPG; and
  - "Market books" are reflected on corporate books.
- OPG requirements – OPG mgmt, PwC (OPG auditor), KPMG (Energy advisor), and OPCD are evaluating accounting risks:
  - OPG Trust purchases regulatory asset from IESO – classifies as intangible asset;
  - OPG consolidates Trust; and
  - OPG retains GBE status.
- No discussion with OAG; in previous Annual Reports, the OAG has raised concerns about the appropriateness of recognizing rate regulated assets and liabilities.

GA Smoothing – Legal Considerations

- The current GA amount paid by consumers is a regulatory charge. One of the requirements of a valid regulatory charge (as opposed to a tax) is that the person paying the charge either benefits from the regulatory scheme or causes the need for regulation.

- In principle, refinancing the GA to spread the costs of generation and conservation assets over the useful life of the assets presents only a low risk of being a tax, as each cohort of consumers pays for a proportion of the GA cost roughly equal to the proportion of the benefit they receive from the useful life of the assets.

- A proposal for refinancing the GA that appears to cross-subsidize near-term consumers at the expense of long-term consumers by back-loading costs more than if costs were spread equally over the estimated lifespan of generation and conservation assets presents a moderately high risk (more likely than not) of constituting a tax.

- Were the charge characterized as a tax, in the event of a challenge, it would be struck down by a court as unconstitutional and consumers would be entitled to recover their payments. This risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

GA Smoothing – Policy Considerations

- Borrowing money to smooth the Global Adjustment (GA), while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - In addition, should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- The impacts are also based on a GA forecast. Since the GA fluctuates, actuals will vary based on demand, the addition of new generation and natural gas prices.
  - A "true-up" mechanism will be required to account for the difference between the "estimate" and "actual" GA costs.

- If Class B electricity consumers, such as commercial and small industries, do not receive the benefit of GA Smoothing (i.e., because it is only targeted to RPP consumers) – consideration could be given to provide tax-based measures to off-set electricity costs (e.g., tax-credits, programs, etc).
  - Class B consumers have raised concerns about the cost of electricity and its impact on their business competitiveness.
  - Government is developing an option that would provide rate relief for Class B consumers.

- Given the legal framework the amount of GA smoothing needs to be proportionate to the generating contracts (i.e., 20-year) and the additional years of generation services still available (i.e., additional 10-years of service).

- Rating agencies and investors in the Province's debt may view this borrowing as an obligation of the Province, regardless of accounting treatment. Depending on the magnitude of the debt to be incurred could have an impact on the Province's borrowing cost.

GA Smoothing – Fiscal Considerations

- If the proposed legal and accounting treatment of the GA financing smoothing proposal is not implemented, there could be a negative impact on the province's fiscal plan, as shown below.

- The table below shows the projected fiscal savings /costs related to GA smoothing Options 1 and 2 under these two legal/accounting treatment scenarios

Fiscal Impact ($M)	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Without Proposed Legal/Accounting Treatment					
Option 1 - Bills Lowered by 25%, RPP Only*	2,266	2,372	2,633	3,096	2,775
Option 2 - Bills Lowered by 20%, RPP Only*	1,574	1,632	1,844	2,282	1,988
Option 3 - Bills Lowered by 18%, RRP Only*	1,487	1,585	1,524	1,503	1,429

*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

Source: Ministry of Energy

Legislative Authority – Considerations

1. Electricity Support Programs

- **RRRP, OESP and First Nations Rate:** Moving costs to the tax base and creating a First Nations rate will require amendments to OEBA. Regulatory amendments (442/01, 314/15, 275/04) will be required to address program details.

- **LDC Affordability Fund (2c):** In order to implement new LDC affordability fund the Province would need to enter into Transfer Payment Agreements with qualified third parties to administer the fund.

2. Bending the Future Cost Curve of Electricity

- No specific legislative or regulatory amendments identified. IESO may need to amend market rules. Agency MOUs/MOAs may require amendment.

3. GA Smoothing

- **Amendments to *Electricity Act, 1998* (EA) and *Ontario Energy Board Act, 1998* (OEBA)**
  - The EA allows the Lieutenant Governor in Council to cause an OPG Holdco to be created under the *Business Corporations Act.*
  - The mandate and governance of the Financing Subsidiary will be addressed through amendments to the EA. Governance provisions will be designed to address the accounting control indicators.
  - The Financing Subsidiary will require authority to recover principle, interest and administrative costs through GA from customers.
  - Legislation would authorize IESO to collect amounts on behalf of the Financing Subsidiary and settle accounts with the Financing Subsidiary as a service provider. Regulatory amendments to GA Regulations would require IESO to:
    - Separately settle and track amounts received from the Financing Subsidiary to lower GA (including maintaining variance accounts).
    - Separately settle and track amounts paid back to the Financing Subsidiary (including maintaining variance accounts).
    - Distributors would continue to collect from consumers and settle with IESO. Generators would continue to be paid by IESO.
  - OEBA-related amendments would allow for OEB oversight. Light touch would focus on the borrowing entity's recovery of administrative costs and its calculation of amounts owing in a period. Heavy touch would give OEB the discretion to determine repayment over time.
  - The certainty of the legislative mechanism to recover the debt and interest, and the extent of discretion of the OEB to alter either amount over time, will have impacts on the availability and cost of capital.
  - Further legal analysis is required as the GA option is developed.

Communication Plan

Objective:

- Demonstrate Ontario's commitment to lower electricity costs for ratepayers through new rate relief initiatives.

Strategic Approach

- High-profile Premier's announcement.
- News release, backgrounders, QA's are being prepared.
- A multimedia marketing and advertising campaign is being prepared on the topic of rate mitigation for electricity consumers.

From: Mike Manning
To: Gadi Mayman
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 10:09:57 AM

Not sure of your schedule, but would 3:30 work for you? Otherwise can find another time.
Mike

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 10:02 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Lynsey Wynberg <Lynsey.Wynberg@ofina.on.ca>
Subject: FW: GA Financing Terms

Mike, I don't know how much you know about this, but maybe it's time to bring you up-to-speed if you're not aware of what the government is thinking of doing on electricity rate mitigation. I'd be happy to fill you in whenever it's convenient for you. Ken has been in the loop through the piece, as it's struck me from the beginning that this is far more of an accounting issue than a funding one.

Regards,
Gadi

From: Gadi Mayman
Sent: Wednesday, February 15, 2017 9:59 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: RE: GA Financing Terms

I agree that from a funding perspective the Province, through the OFA (actually the OEFC, but that's just a detail), would be able to accommodate this, so I think it definitely becomes an accounting question. I'm under the impression that OPCD has already been linked in on this, but it would make sense to make sure that they are.

Regards,
Gadi

From: Nelms, Scott (ENERGY) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, February 15, 2017 9:56 AM
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Subject: GA Financing Terms

Hi Gadi,

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OPG is going to reality check this based on what it thinks a 3rd party lender would expect. At a high level, they have suggested that interest capitalization would be unrealistic beyond 1 year.

What do you think is realistic if OFA acts as lender? I assume the Province may have some more flexibility, but would require terms that meet the asset test for accounting purposes. Should we link in with OPCD as well on this question?

Thanks,
Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

From: Gadi Mayman
To: Mike Manning
Subject: RE: GA Financing Terms
Date: Wednesday, February 15, 2017 3:41:18 PM
Attachments: Cabinet Submission - Electricity Price Mitigation_Feb15 FINAL.pdf

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Sorry, I thought that I'd attached it to my original email. Here it is.

From: Mike Manning
Sent: Wednesday, February 15, 2017 3:40 PM
To: Gadi Mayman
Subject: RE: GA Financing Terms

Hi Gadi:

Was there a deck you were going to email me?

Mike

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scott.nelms@ontario.ca

Ontario

Electricity Price Mitigation

Ministry of Energy

February 15, 2017

Minister

Deputy Minister

Context

- Electricity costs are increasing as the necessary investments are made to decarbonize and modernize the province's electricity infrastructure (i.e., $35 billion+ investment in cleaner generation and $15.5 billion investment in transmission and local distribution systems).

- Ontario has taken a number of actions to lower electricity costs for all consumers by:
  - Deferring investments in generation (e.g., new build nuclear), improving market efficiency (e.g., wind dispatch) and decreasing the cost of renewable procurements (e.g., Green Energy Investment Agreement (GEIA) renegotiation, decreasing Feed-In Tariff (FIT) prices, competitive Large Renewable Procurement (LRP)).
  - Increasing cost effectiveness and improving efficiency by adopting new electricity market approaches (e.g., no new NUG contracting and demand response).

- Following the 2016 Throne Speech, actions were announced to further reduce electricity costs by:
  - Providing an 8% rebate – $11/month savings, updating Rural or Remote Rate Protection (RRRP) – $45/month savings, expanding the Industrial Conservation Initiative (ICI) – up to one-third savings for participants and suspending the LRP II and the Energy from Waste Standard Offer Program (EFWSOP) – up to $3.8 billion in cost savings.

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

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

- On a number of occasions the Premier has indicated publicly that further relief on electricity prices will be provided to consumers in the near term.

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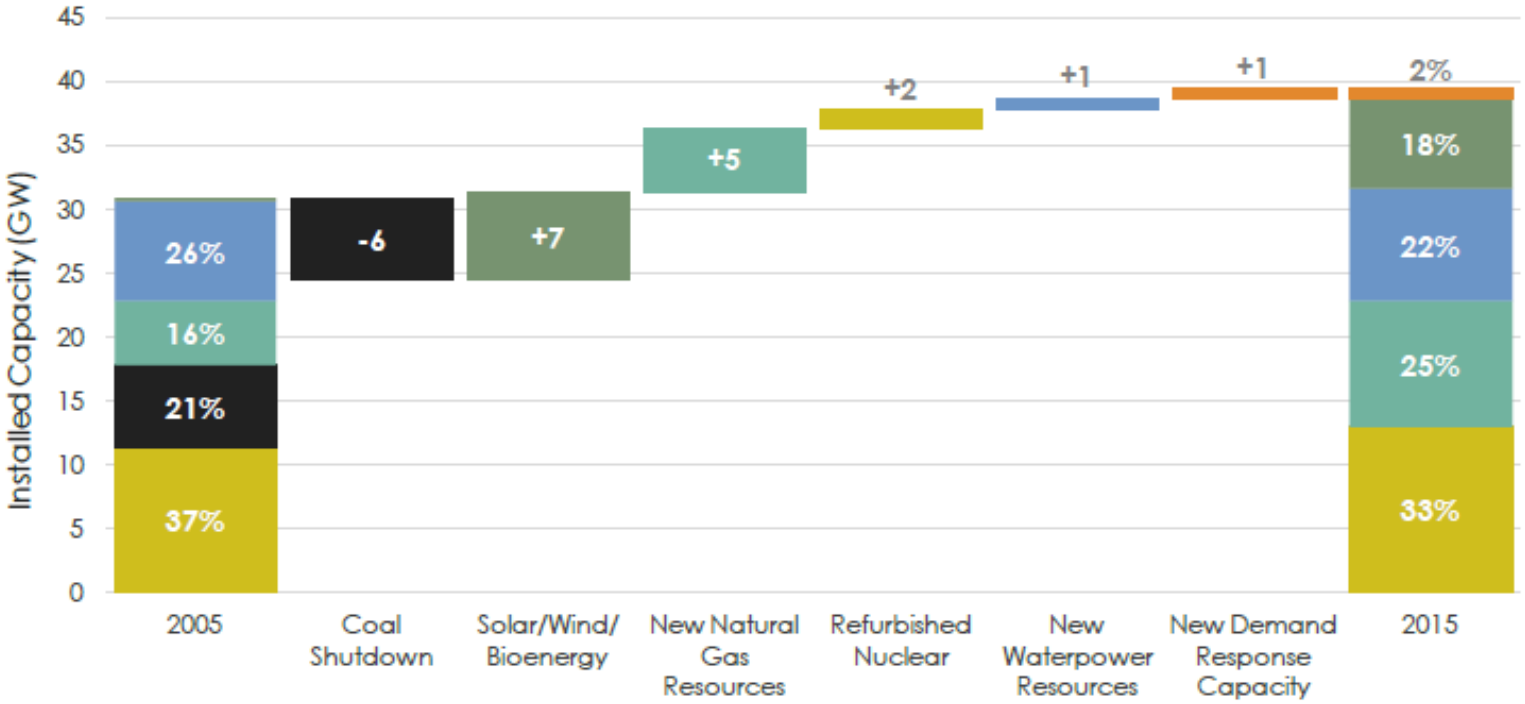
Context – Infrastructure Investments

- In the eleven year period between 2005 and 2015, government added new electrical capacity to Ontario's grid to restore reliability, replace coal and meet environmental objectives.



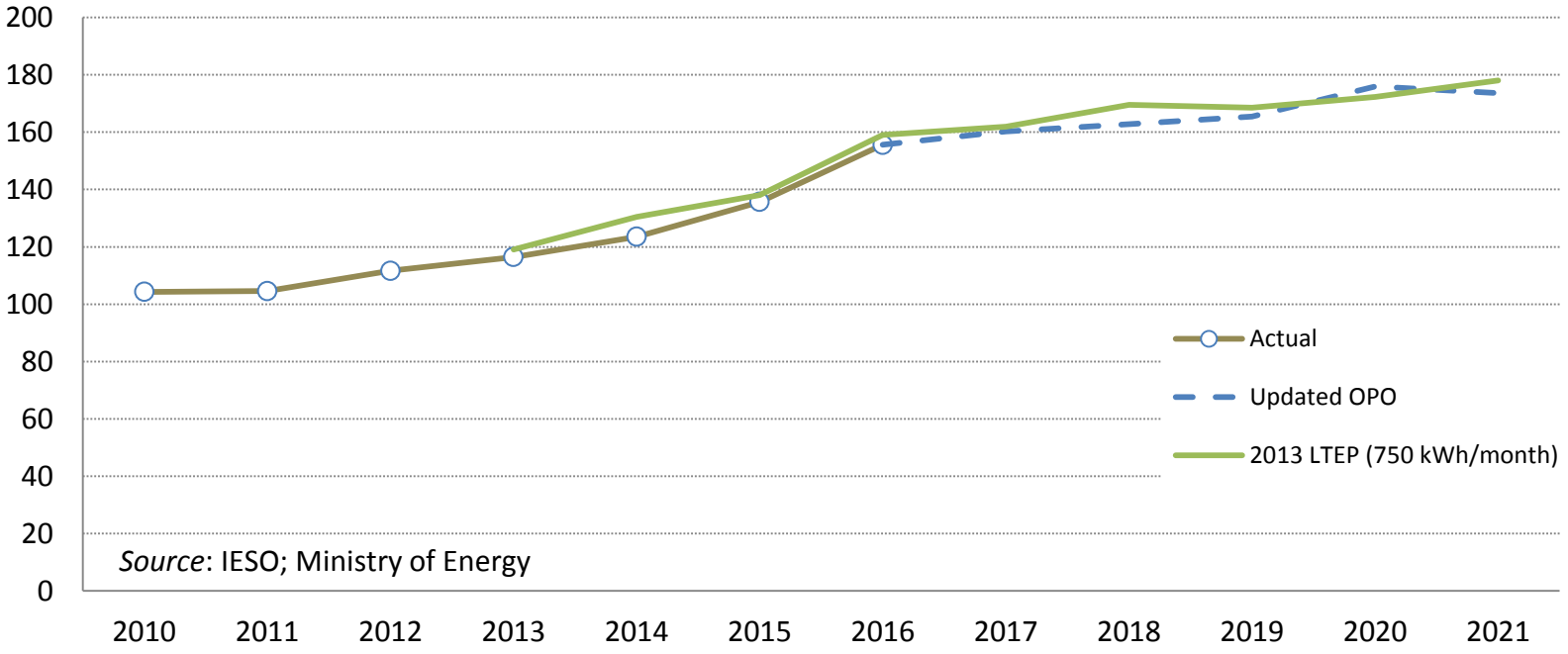
Source: IESO Ontario Planning Outlook

Context – Electricity Prices

- Electricity price increases have generally outpaced inflation. There have been several government policies that have impacted electricity prices over the past several years, including: HST, the Industrial Conservation Initiative, the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge (DRC).

Illustrative Typical Residential Electricity Bills

Historical and Forecast in $/month



Rate Mitigation Proposal

- Three approaches are proposed:

  1) Helping the most vulnerable by enhancing electricity support programs and shifting cost onto the tax-base:
     - Rural or Remote Electricity Rate Protection (RRRP) Enhancement (Delivery Charge Relief);
     - Ontario Electricity Support Program (OESP) Expansion;
     - LDC Affordability Fund; and
     - On-Reserve First Nations Delivery Credit.

  2) Ongoing activities to bend the future cost curve of electricity:
     - Ontario Energy Board (OEB) – Identify opportunities for future LDC efficiencies and rates; and
     - Independent Electricity System Operator (IESO) – Modernize Ontario's electricity market through electricity Market Renewal initiatives.

  3) Smoothing the global adjustment (GA) to provide significant and immediate rate relief through cost deferral of the GA:
     - Implementation Model; and
     - Smoothing Mechanism.

- The following slides provide additional information on the above initiatives.

ELECTRICITY SUPPORT PROGRAMS TO HELP THE MOST VULNERABLE

Electricity Support Programs to Help the Most Vulnerable

- To date, a number of electricity support programs are funded through the electricity rate-base. There is opportunity to provide support to a more targeted subset of customers who are disproportionately affected by increased electricity costs and to shift these costs to the tax base.

- These customers include:
  - **High Delivery Cost Customers:** Some customers in rural areas where the cost to delivery electricity is high can experience difficulty in reducing their electricity bill through conservation, particularly when reliant on electric heating.
  - **Low-Income Customers:** Rising electricity costs make up a disproportionally large amount of the household expenditures for low-income households.
  - **First Nation On-Reserve Customers:** On-Reserve First Nations customers experience challenges with energy affordability and are seeking to address historical grievances associated with electricity system infrastructure.

- To provide targeted assistance to the customers and alleviate electricity cost burden, ENERGY proposes to:

  a. **Enhance Rural or Remote Rate Protection** (RRRP) by funding its costs through the tax base and providing additional support to customers of designated Hydro One rate classes and other high distribution cost Local Distribution Companies (LDCs).

  b. **Enhance Ontario Electricity Support Program** (OESP) by funding its costs through the tax base and increasing eligible benefits by 50%.

  c. **Establish an LDC Affordability Fund**, providing energy efficiency measures at no or minimal cost to those struggling to pay electricity bills and are ineligible for low-income conservation or support programs.

  d. **Implementing On-Reserve First Nations Delivery Credit**, to remove Delivery charges for on-reserve First Nations customers.

A. Delivery and Distribution Charge – Background

- The **Delivery** line on a typical consumer bill is specific to a consumer's Local Distribution Company (LDCs) and accounts for roughly 25-35% of the total bill before taxes.
- Delivery covers the costs of getting electricity from generating stations across the province to homes and businesses and combines three cost components of the electricity sector into one line item charge:
  - **Transmission:** The costs of moving electricity across high voltage lines from generating stations to the distribution system. This cost is recovered through a variable charge that is approved by the OEB.
  - **Distribution:** The costs of moving electricity from the transmission system to homes and businesses. Depending on the LDC, distribution costs makes up about 60% to 80% of the Delivery line.
    - This cost is currently recovered through both a variable charge and fixed charge, approved by the OEB. Distribution rates are moving to a fully-fixed charge over next 5 years.
  - **Line Loss:** The costs to recover electricity that is lost as heat when its delivered over a power line. Each LDC is assigned by the OEB a specific line-loss adjustment factor to reflect their loses particular to their assets. This factor is multiplied against the monthly electricity cost to determine the monthly cost.

SAMPLE MONTHLY BILL STATEMENT

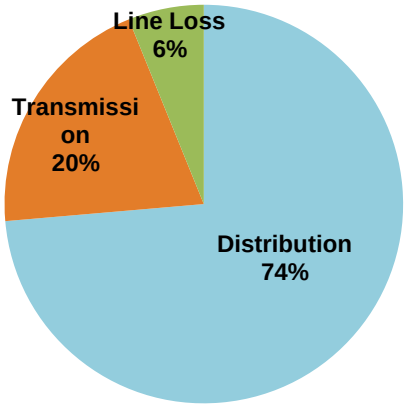
Anytown Hydro-Electric Limited

Account Number:
000 000 000 000 0000

Meter Number:
00000000

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

Cost breakdown of Delivery Line for an Average Residential Bill*



* Toronto Hydro Bill @ 750kWhs

A. Rural or Remote Rate Protection Program – Background

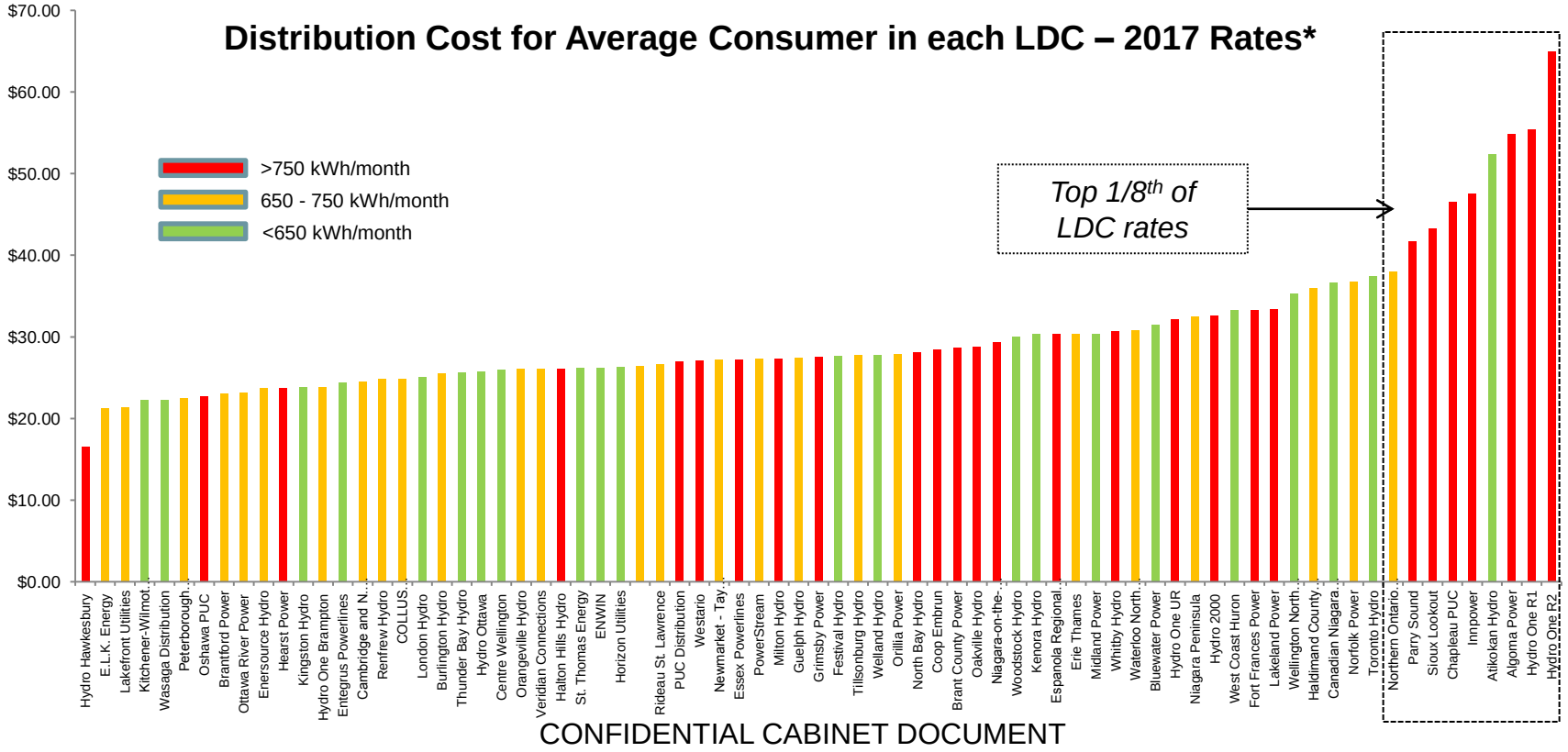
- Rural or Remote Rate Protection (RRRP) mitigates some of the high costs of electricity distribution in rural or remote areas of the Province. It is a legacy program of the old Ontario Hydro and has existed in its current form since 2001.
  - RRRP is funded by ratepayers in Ontario.
- Part of the program helps fund the costs of Hydro One customers classified into the "R2" residential rate class. There are 335,000 R2 customers across the Province. These customers have some of the highest Delivery costs in the Province.
  - From 2001-2016 the program provided $125.4 million annually to help defray these costs.
  - In the 2016 Speech from the Throne, this funding was expanded by $116.4M to a total of $241.9 million.
  - As of Jan 2017 R2 customers receive $60.50/month off their distribution costs.
- These customers still have high delivery and high distribution costs and are often faced with significantly higher than average bills.
  - The higher than average consumption patterns coupled with higher than average distribution rates has resulted in monthly bills many view as no longer affordable.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- While the RRRP helps mitigate some of the higher distribution costs for Hydro One R2 customers, there is an opportunity to provide further relief to consumers in relatively high-distribution cost outlier LDCs (top ~1/8th of distribution rate classes).
  - If expanded to the top 1/8th of distribution costs, this enhancement would also include Hydro One R1 customers (medium density), as well as LDCs with high distribution costs including: Northern Ontario Wires, Lakeland Parry Sound, Chapleau, Sioux Lookout, InnPower, Atikokan and Algoma.
- Mitigation could be provided by harmonizing distribution rates for these LDCs at the lowest distribution rate paid by an average consumer in this group.
  - Based on projected 2017 LDC rates, the lowest distribution rate paid by an average consumer in this group would be ~$38/month (with the highest being $65).
  - Is consistent with the OEB's mandated move to fully fixed distribution rates for all LDCs.
  - An estimated 700,000 customers would benefit from these enhancements.
  - Setting a lowest distribution rate across these LDCs would help mitigate geographic-based differences in rates for the consumers who are most impacted and often see such differences as inequitable.
- Mitigation for all electricity consumers would be provided by moving the existing RRRP program costs and the proposed enhancements from the electricity rate base to the tax-base.

A. Enhancing the Rural or Remote Protection Program (RRRP)

- The table below shows what 2017 distribution costs are projected to be for the average consumer within each LDC across the province, and highlights the highest-cost distribution rates.
- The charts on the following slides show what the benefits would be in each LDC if the fiscal plan was used to support harmonizing distribution costs for customers of the LDCs in the top ~1/8th of rate classes at $38/month.



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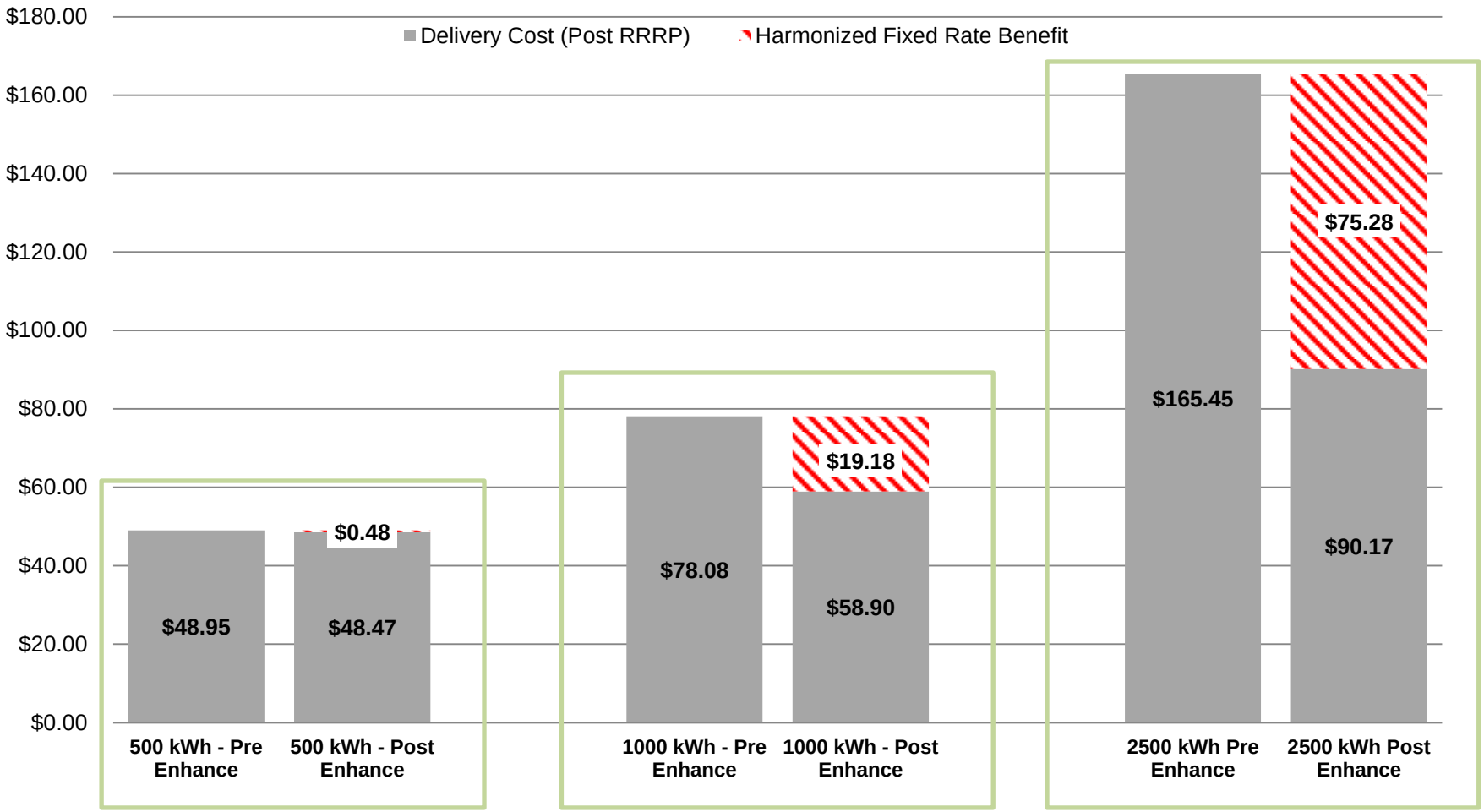
2017 Approved and Proposed (Decisions Pending – rates are subject to change).

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R2)



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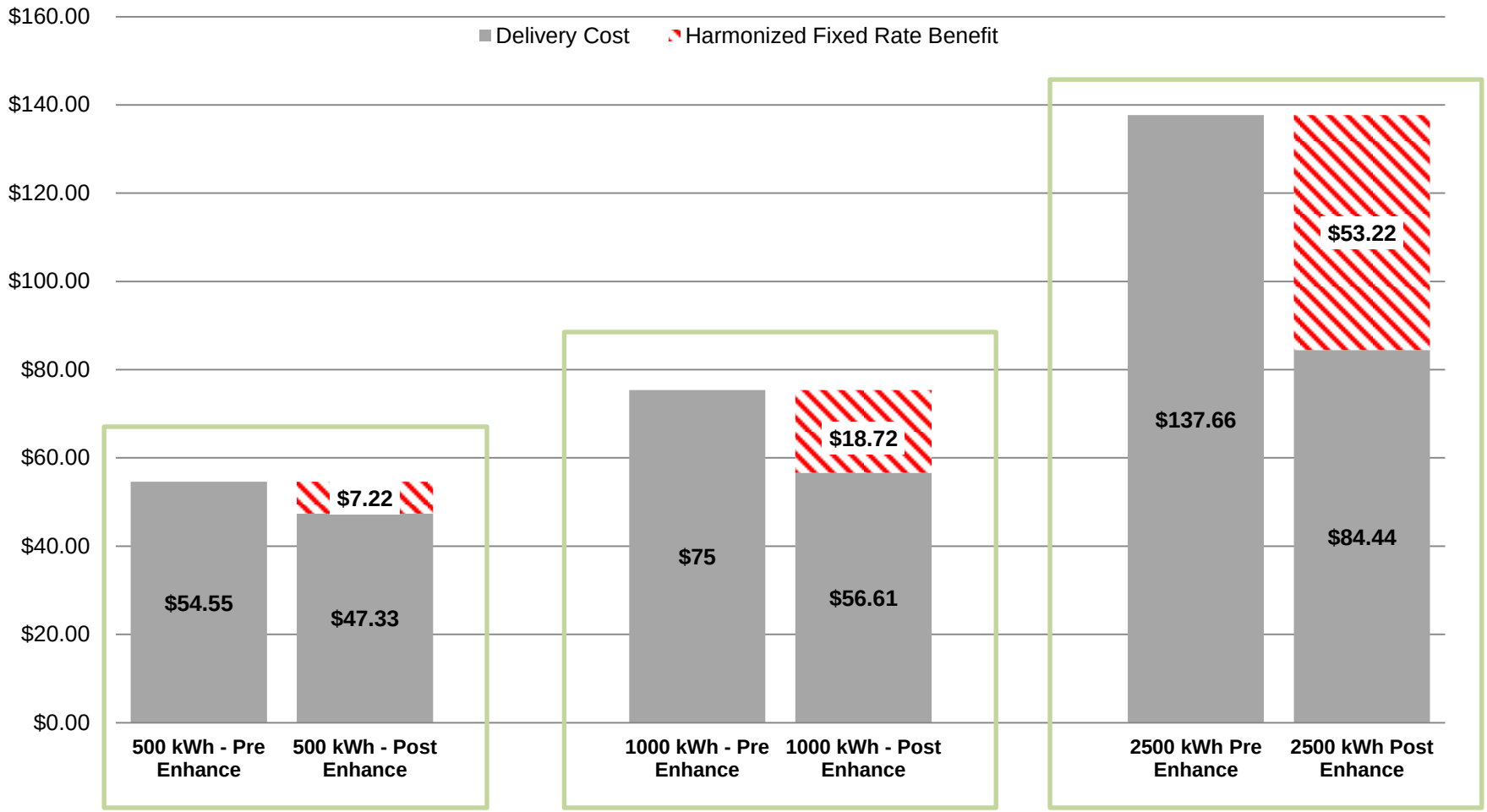
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Hydro One R1)



Note: *Rates are for 2017 (either approved or proposed)*

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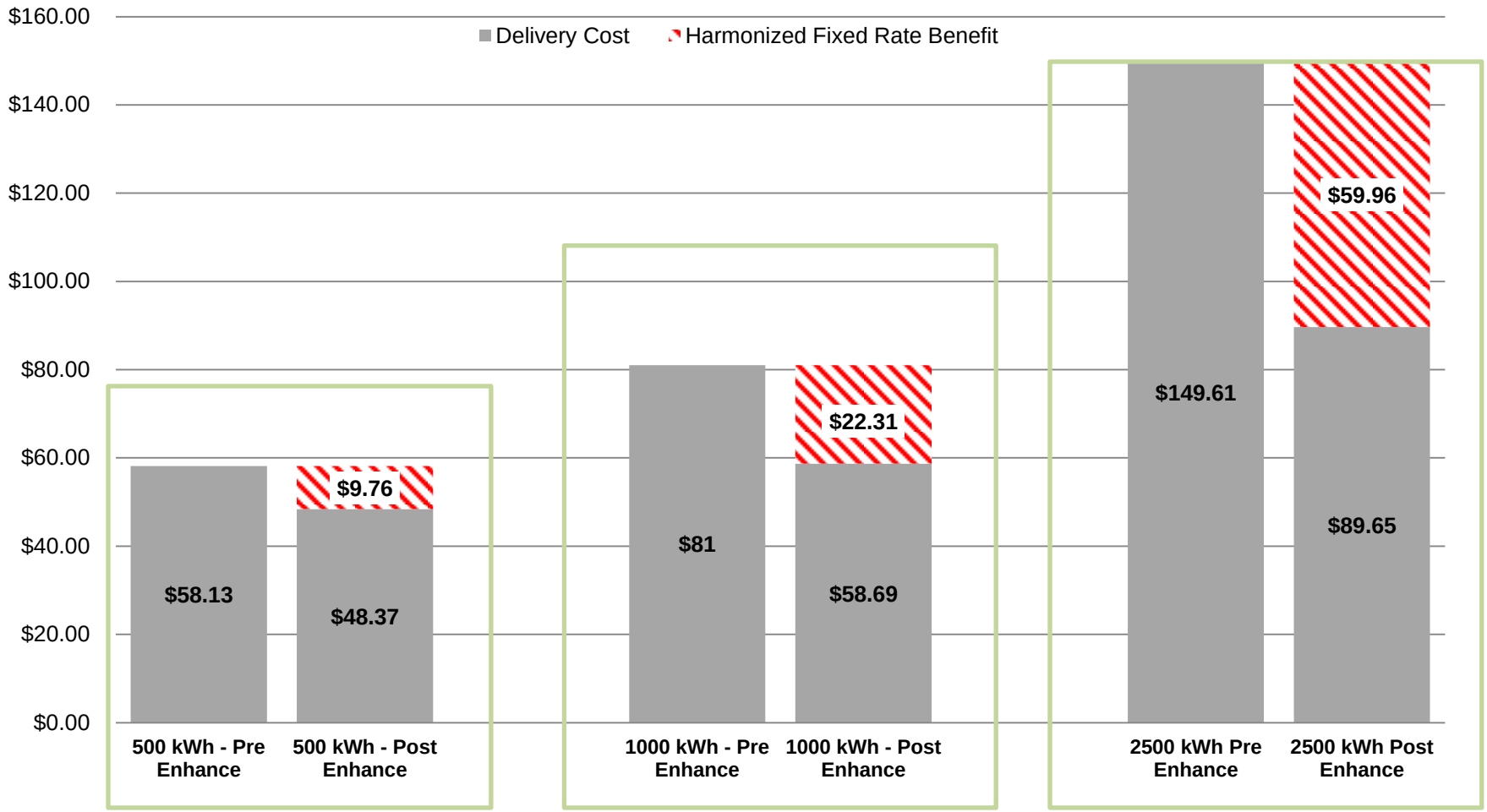
A. Harmonized Distribution Cost – Delivery Line Impact (Algoma Power)



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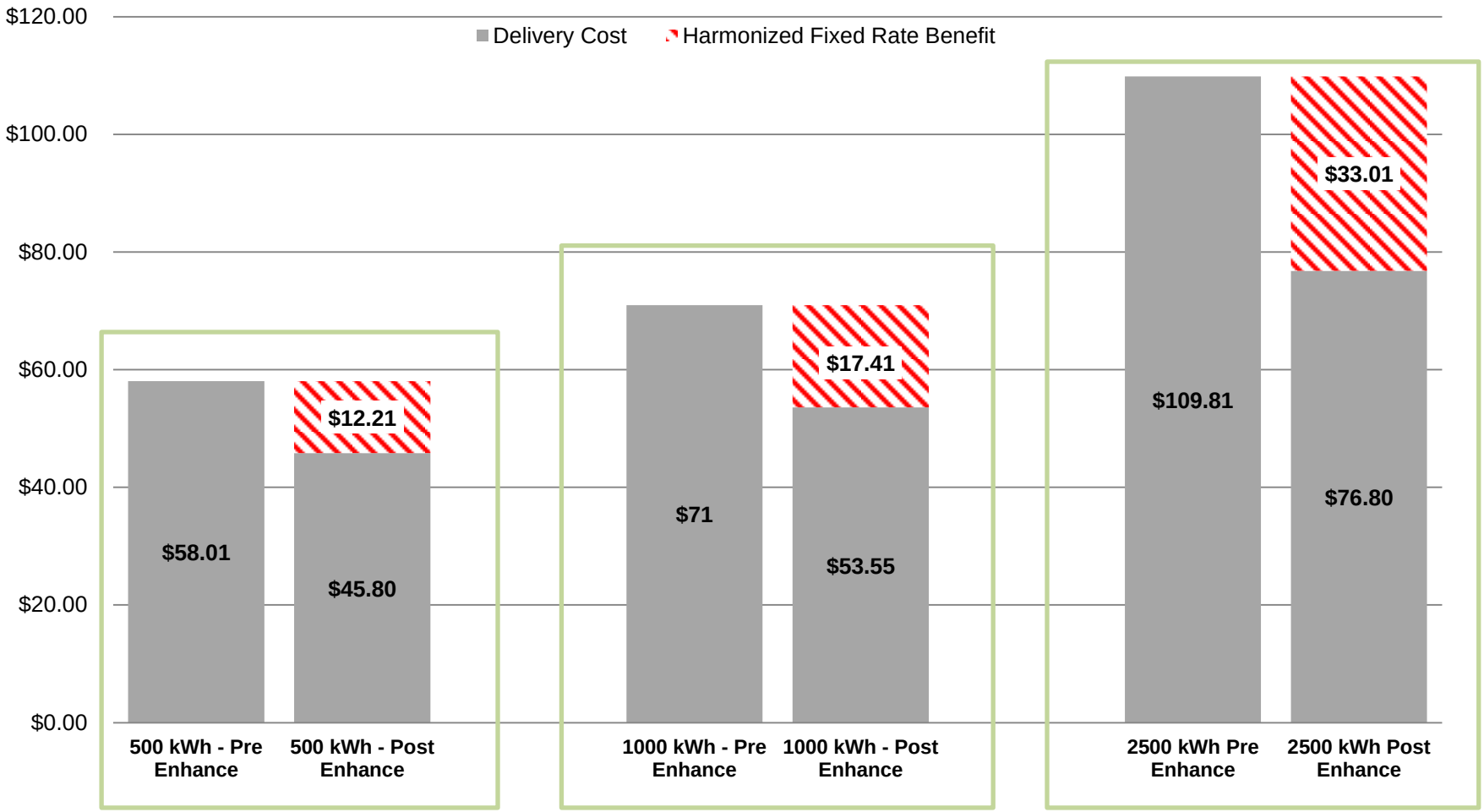
Note: *Rates are for 2017 (either approved or proposed).*
Algoma Power receives RRRP to support operational costs.

A. Harmonized Distribution Cost – Delivery Line Impact (Atikokan Hydro)



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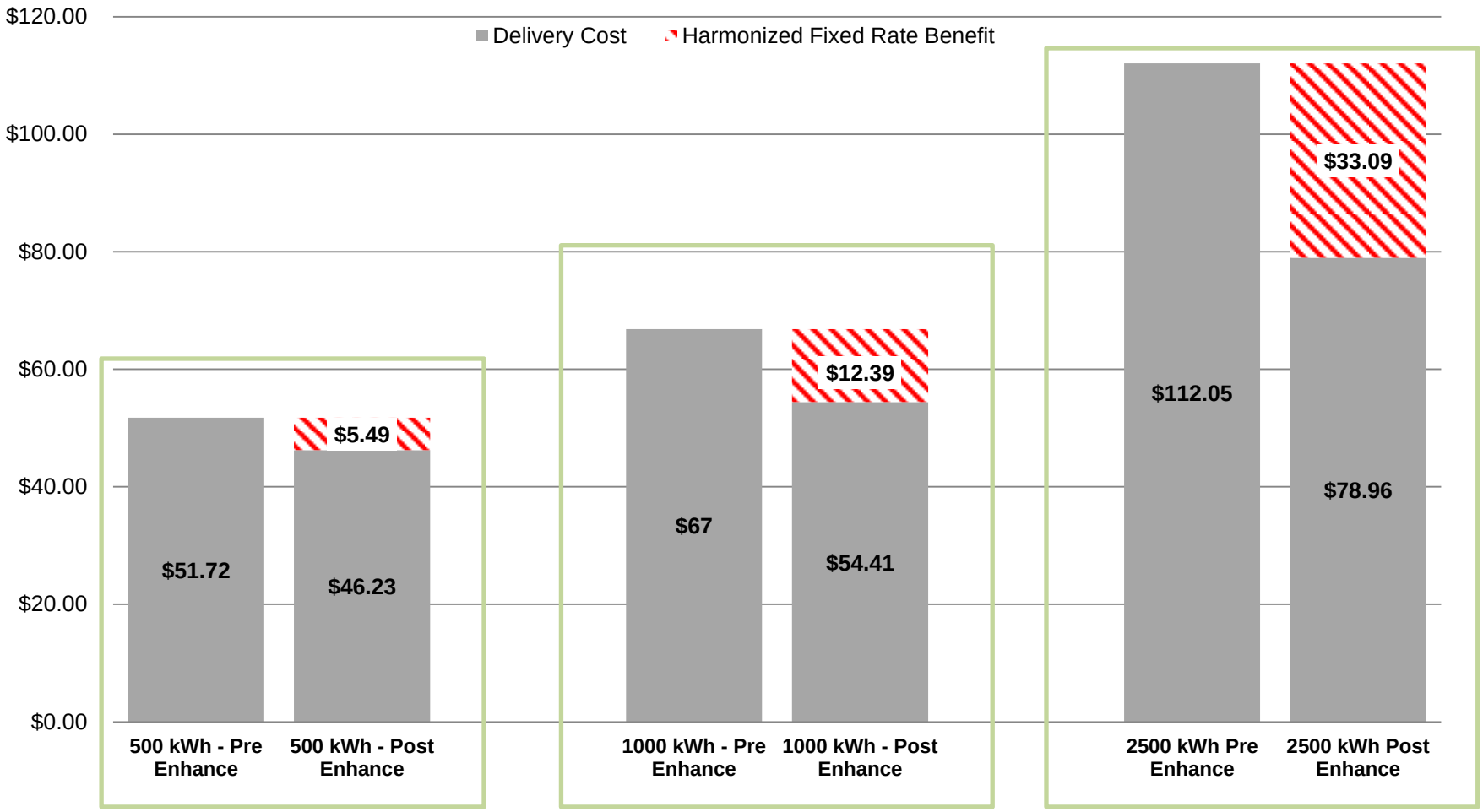
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (InnPower)



Note: *Rates are for 2017 (either approved or proposed)*

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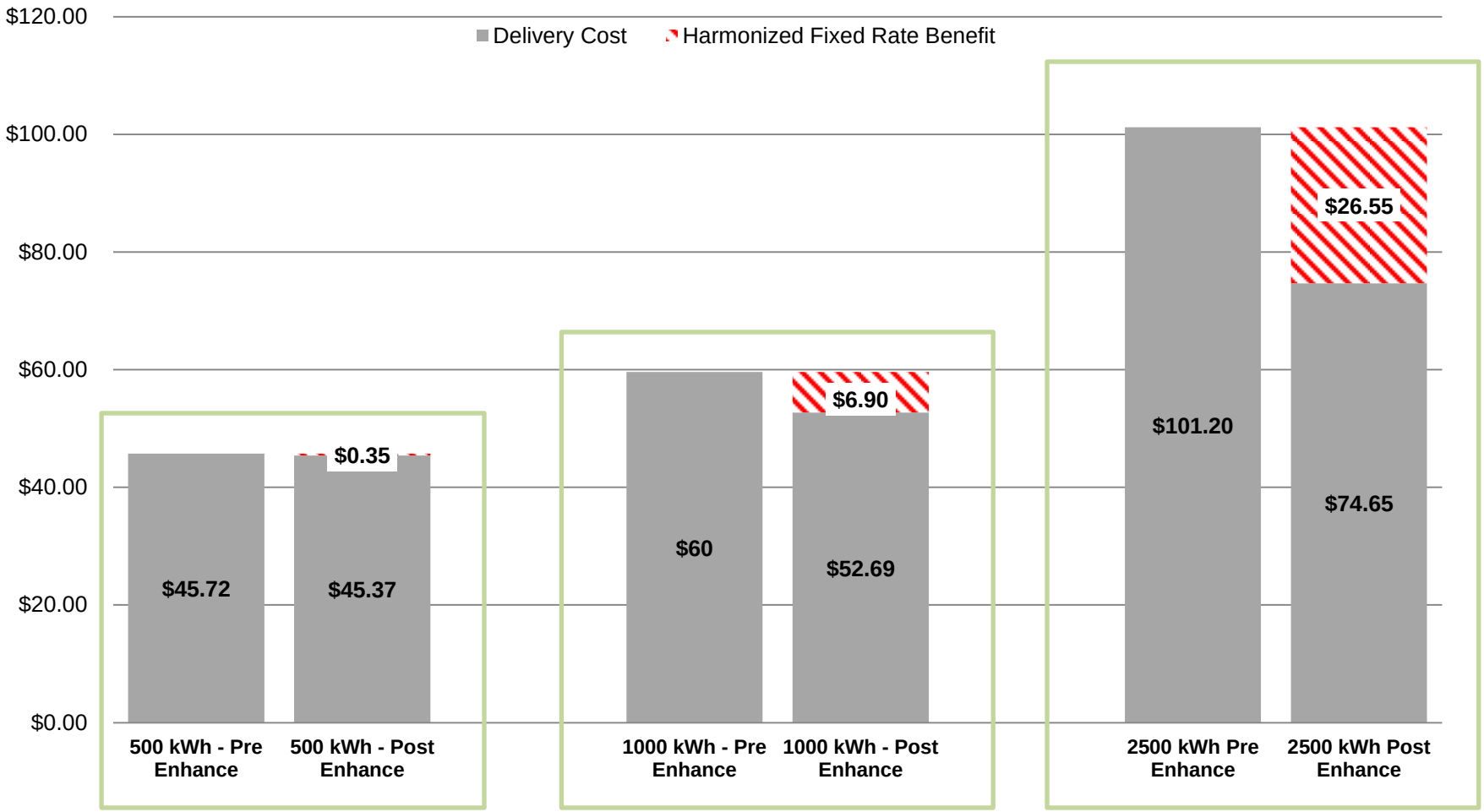
A. Harmonized Distribution Cost – Delivery Line Impact (Chapleau PUC)



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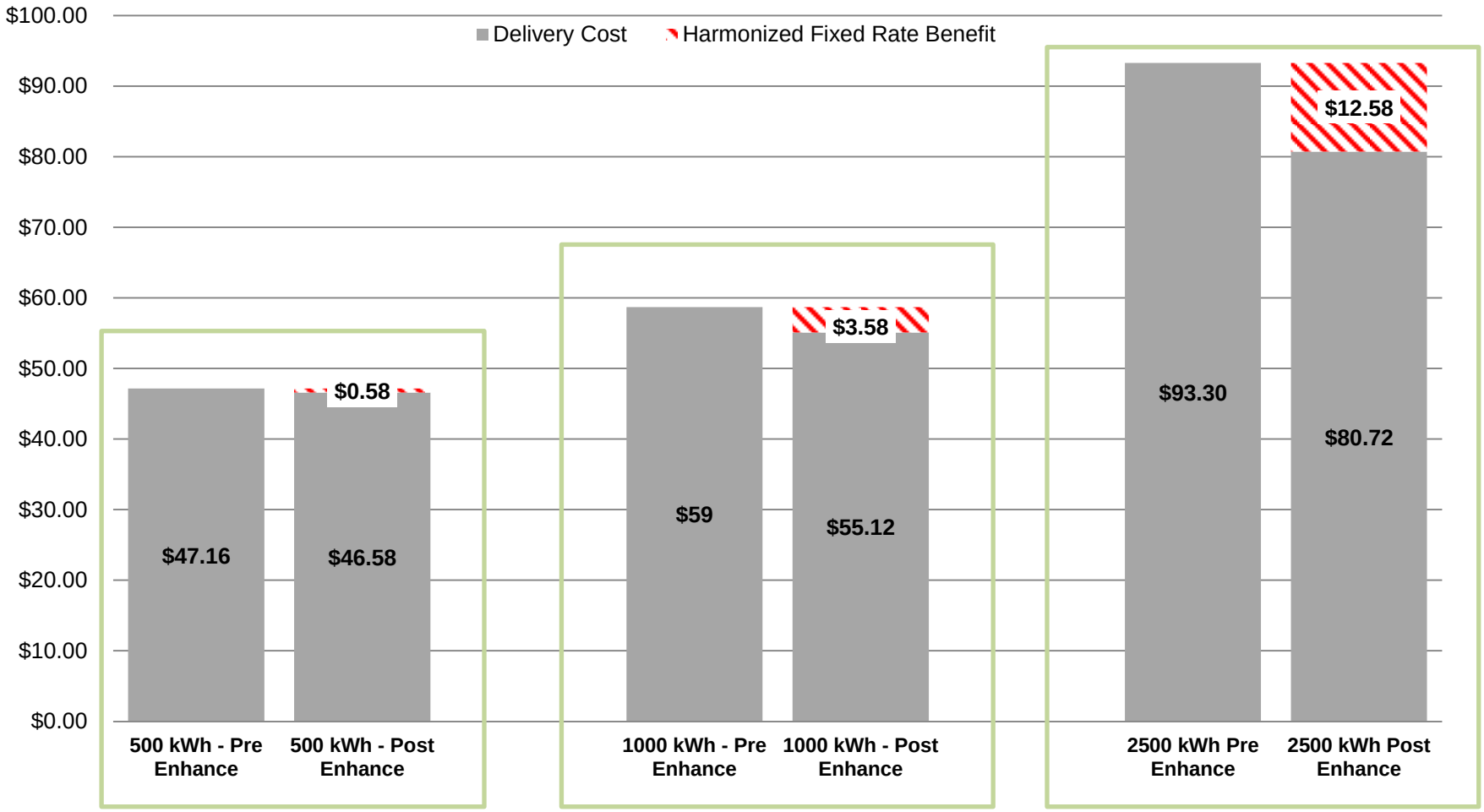
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Sioux Lookout Hydro)



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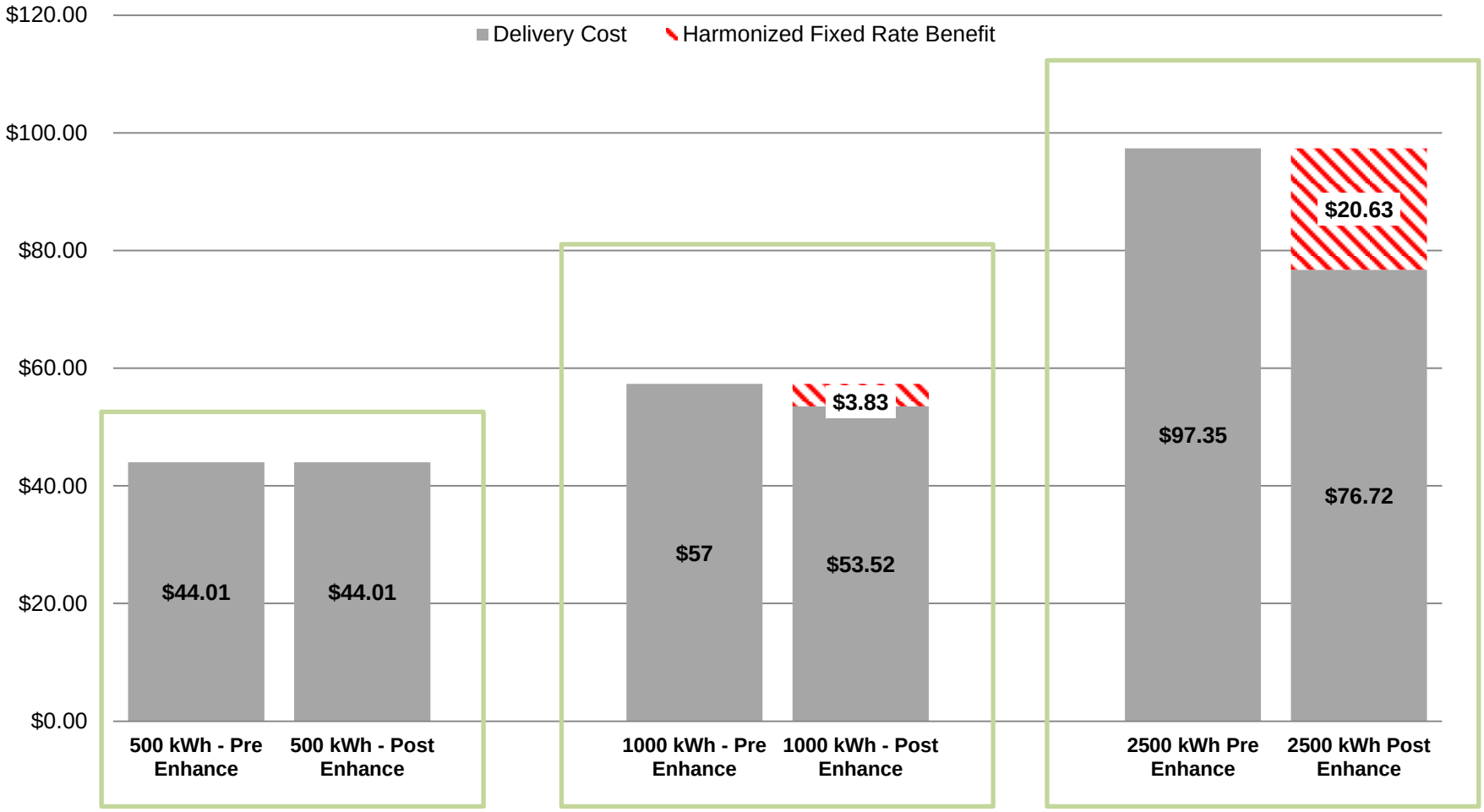
Note: *Rates are for 2017 (either approved or proposed)*

A. Harmonized Distribution Cost – Delivery Line Impact (Lakeland Power – Parry Sound)



Note: *Rates are for 2017 (either approved or proposed). Rates are for the Parry Sound territory within Lakeland Power. Other Lakeland Power customers (Huntsville area) not impacted.*

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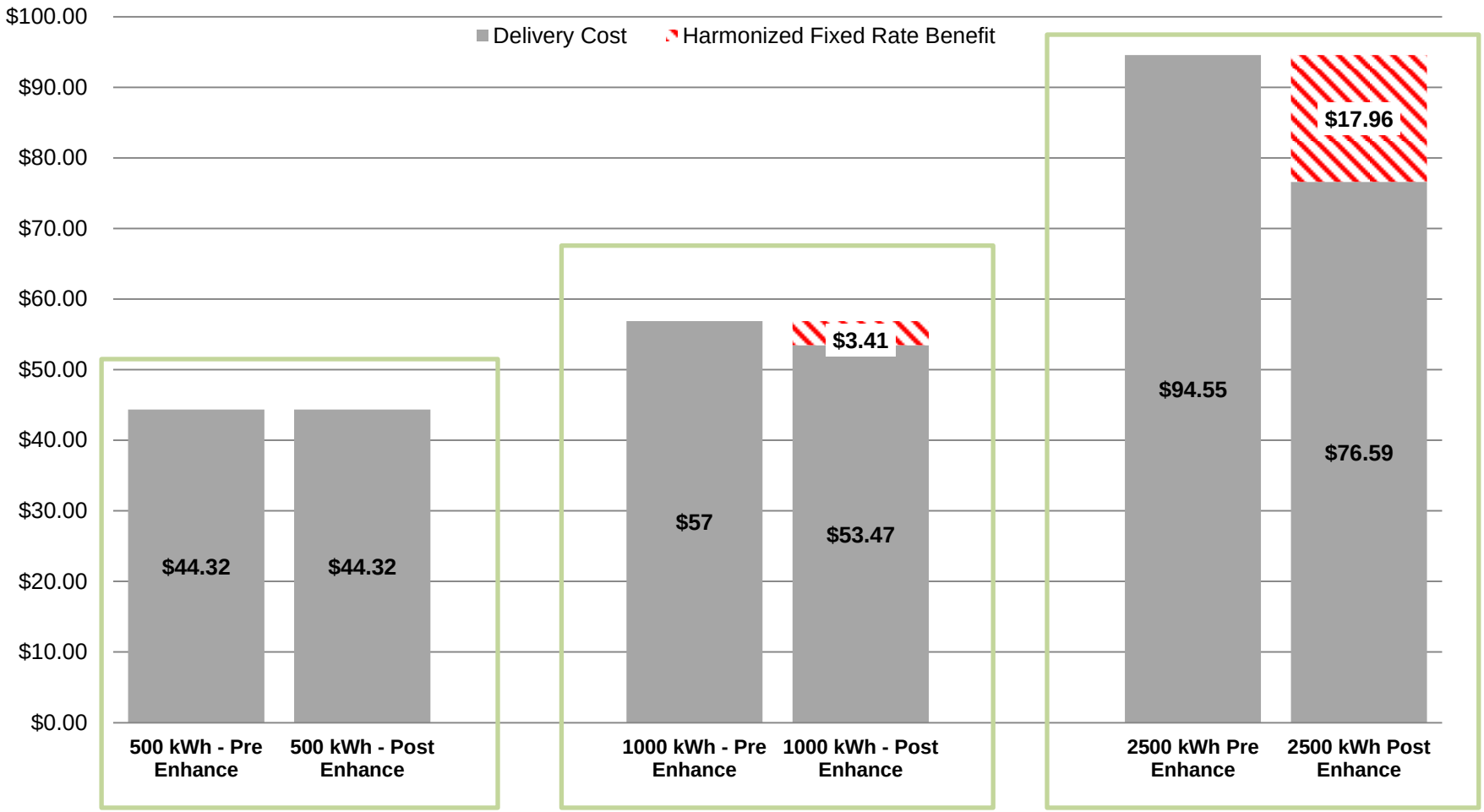
A. Harmonized Distribution Cost – Delivery Line Impact (Northern Ontario Wires Inc.)



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Note: *Rates are for 2017 (either approved or proposed)*

A. RRRP Enhancement – Considerations

Implementation

- The Ministry will need to ensure that only the high distribution cost LDCs are captured within the program framework
  - LDCs may need to be named explicitly in the legislation/regulation
  - A mechanism would also need to be created to ensure the level of benefit changes year to year
- LDCs will need to change their billing and customer information systems. OEB estimates that the implementation would take at least 6 months or more, following finalized regulations
- New legislation would be required to establish this program. Legal and regulatory risks (particularly with regards to legal authority and to the Ontario Energy Board's role in setting rates and incenting efficiencies) require further analysis
  - Some options may impact OEB rate-setting processes and create disincentives towards Hydro One productivity and performance improvements.
- Providing a tax-based subsidy outside of exiting rate setting mechanism reduces incentives for customers and distributors to engage on operating costs and capital planning.
- A mechanism will need to be created to ensure that LDCs/OEB/IESO/Province are aligned in the year-to-year forecasting and costing of the RRRP program and the enhancements.

A. RRRP Enhancement – Considerations (cont'd)

Fiscal

- As distribution costs vary year to year, forecasting fiscal impacts are challenging:
  - Hydro One is expected to submit its cost of service application for 2018 and beyond (3-5 years) in spring 2017. The rate increases requested in this application could potentially increase the proposed fixed rate which could have a significant impact on fiscal requirements and ratepayer impacts.
  - The other high distribution cost LDCs generally have lower distribution cost increases, however, it is difficult to forecast fiscally the impact of the program until LDCs submit their cost of service applications to the Ontario Energy Board.

Fiscal Impact ($M)	16-17	17-18	18-19	19-20	20-21
TOTAL	**-**	**454**	**450**	**446**	**444**

Note: Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

B. Ontario Electricity Support Program (OESP)

- The OESP is an income-tested, application based program that lowers electricity costs of the most vulnerable consumers by a rebate directly on bills. The OESP is currently funded by the rate base.
- OESP benefits vary by income level and family size, and there are two benefit scales that include:
  - The basic program credit ranges from $30/month to $50/month.
  - An enhanced credit that ranges from $45/month to $75/month for consumers that are either Indigenous, use electric heat or have certain medical devices.
- The OESP launched on January 1, 2016, and in just over a year:
  - Almost 180,000 have been enrolled in the program representing 30% of the total targeted low-income population and some 278,000 applications have been received.
  - Almost $50 million in benefits have been provided to vulnerable consumers.
  - Some 172 intake agencies have been mobilized to assist low income consumers to apply for the OESP.
- To drive this uptake, the OEB has engaged in extensive outreach, including advertising in multiple languages, and continuing to work with partner agencies to develop a model for “application clinics” across the province to increase program awareness and uptake across the province.

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B. Ontario Electricity Support Program (OESP) (cont'd)

- There are a numbers of ways that the OESP program can be enhanced, including:
  - Working to get the OESP participation as close as possible to 100%:
    - Streamlining the application process to make it easier / quicker to get through (e.g., an alternative to the requirement to mail-in signed consent forms);
    - Putting in place a more aggressive communications strategy to make sure vulnerable communities are aware of the program; and
    - Exploring automatic OESP qualification for those who receive provincial programs (e.g., OW, ODSP).
  - Increasing the existing benefit scales by an additional 50% and expanding who benefits are provided to (see the following slide for details on what this enhancement would do).
- It is also recommended that the OESP be enhanced and also supported from the tax-base as part of the rate mitigation package.

B. Ontario Electricity Support Program (OESP) (cont'd)

- The tables below outline the existing OESP benefit scales and how the scales would be enhanced if increased by 50% and benefits are extended to additional groups (represented in the circled boxes):

Existing OESP Benefit Scales

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$30	$30	$34	$38	$42	$50	$50
	$28,001 - $39,000	-	-	$30	$34	$38	$42	$50
	$39,001 - $48,000	-	-	-	-	$30	$34	$38
	$48,001 - $52,000	-	-	-	-	-	-	$30

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$50	$55	$60	$75	$75
	$28,001 - $39,000	-	-	$45	$50	$55	$60	$75
	$39,001 - $48,000	-	-	-	-	$45	$50	$55
	$48,001 - $52,000	-	-	-	-	-	-	$45

Proposed +50% OESP Benefit Increase*

Sliding Scale #1		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$45	$45	$51	$57	$63	$75	$75
	$28,001 - $39,000	-	$40	$45	$51	$57	$63	$75
	$39,001 - $48,000	-	-	$35	$40	$45	$51	$57
	$48,001 - $52,000	-	-	-	-	$35	$40	$45

Sliding Scale #2		Household Size						
		1	2	3	4	5	6	7 +
Income Bracket	< $28,000	$68	$68	$75	$83	$90	$113	$113
	$28,001 - $39,000	-	$60	$68	$75	$83	$90	$113
	$39,001 - $48,000	-	-	$52	$60	$68	$75	$83
	$48,001 - $52,000	-	-	-	-	$52	$60	$68

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***Note:** The proposed higher scale, including the amounts in circles are proposed and will be refined in consultation with the OEB.

B. Ontario Electricity Support Program (OESP) – Considerations

Fiscal Impact

- Changes to legislation / regulation may be required to establish and define the parameters for OESP to receive funding from the tax-bas. The scope of changes would depend on the implementation / delivery mechanisms.
- Financial flow-through mechanisms would need to be considered in consultation with IESO and LDCs. Likely to be modeled after processes used for the Ontario Rebate for Electricity Consumers (OREC).
- The OEB has been collecting program funding in excess of program costs and has accrued a positive balance. This balance must be addressed when moving to the tax base.
- If OESP amounts are increased, it will need to be confirmed that the credit is not treated as taxable income. This was addressed in the current iteration of the OESP.
- Adding additional categories to the OESP matrix require will take time to implement as it will require changes to the central system as well as LDCs' billing systems. As well, the matrix will no longer follow the Low Income Measure (LIM), which could put additional pressure on the OESP and other provincial programs.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be).	-	178	239	290	334

C. Establishing a New LDC Affordability Fund

- For eligible low-income customers, the Home Assistance Program (HAP), delivered by LDCs under the Conservation First Framework, provides efficiency upgrades and education, at no cost, to help improve the energy efficiency and comfort of their homes and help customers manage their electricity bills.

- HAP does not address the needs of those customers that do not qualify as "low-income" but could benefit from conservation programs.
  - At the end of 2015, there were over 560,000***** residential electricity accounts in arrears; of these about 19,900****** (~3.6%) accounts were eligible to participate in low-income conservation and support programs.
  - According to the Ontario Energy Board (OEB), in 2015 about 60,000 customers had their electricity service disconnected.

Proposal: Establish Affordability Fund to Provide Existing Low-Income Conservation Program to Other Electricity Customers

- The Ministry proposes establishing an Affordability Fund which would be available to LDCs to provide similar energy efficiency measures as provided under HAP to targeted customers.
- The Affordability Fund would not be used to provide grants or financial assistance to customers to forgive all or a portion of their arrears or electricity bill.

*** Note:** Unverified numbers reported by LDCs to the OEB
**** Note:** Low-income customers identified through participation in LEAP

C. Establishing a New LDC Affordability Fund (cont'd)

Fund Details:

- An Affordability Fund would be accessible to LDCs only, and would target those customers who are most in need, such as those who are facing disconnection and who cannot qualify for the low-income programs.
  - By providing support for energy efficiency improvements, the Fund could help these customers reduce their future bills and avoid future disconnections.
  - The Fund would provide LDCs with an additional tool to provide assistance to their customers.

Eligibility Criteria/Fund Principles:

- Determination of eligibility could involve a number of factors and metrics:
  - Do not meet the definition of "low-income";
  - May have triggered action by an LDC collection department (e.g., are in arrears, have been placed on one or more payment plans, are due to be disconnected, etc.);
  - Priority could be given to eligible customers in electrically-heated homes, or other unique circumstances; and
  - Require financial assistance to pay for energy efficiency measures.

C. Establishing a New LDC Affordability Fund (cont'd)

Implementation

- ENERGY is currently in discussions with several large LDCs to determine the feasibility of establishing a Fund and to identify a willing LDC(s) to administer the funds.
  - LDCs have over 10 years of experience in delivering conservation programs, including experience specific to contracting for programs that target low-income customers.
  - LDCs are best positioned to identify and target their customers who are most in need.

- Given the scope of the Fund, an LDC would need a firm financial commitment up front before implementation. LDCs rely on rate-payer funding for most of their activities. The Affordability Fund would be a unique venture from an LDC perspective given that it is tax funded.

- LDCs would apply for funding to the Fund administrator, to offer energy efficiency measures to those customers that meet the targeted eligibility criteria.
  - Recipients could receive measures ranging from $3,000 to $5,000 per customer, at no or minimal cost. For example, measures available in the Home Assistance Program include:
    - Energy-saving light bulbs (LEDs); power bars; energy efficient window ACs, refrigerators, freezers, dehumidifiers; low-flow showerheads, hot water blankets, pipe wrap and faucet aerators (in homes with electric water heating); and
    - Programmable thermostats, weather stripping, insulation (in homes with electric heating).
  - Consideration could also be given to including cold climate air source heat pumps for electrically heated homes, which can range in cost from $7,000 to $13,000.
  - As an illustration, with $200 million, the estimated reach of the fund could be 15,000 to 65,000 households, depending on measures and uptake.

C. Establishing a New LDC Affordability Fund – Considerations

Considerations

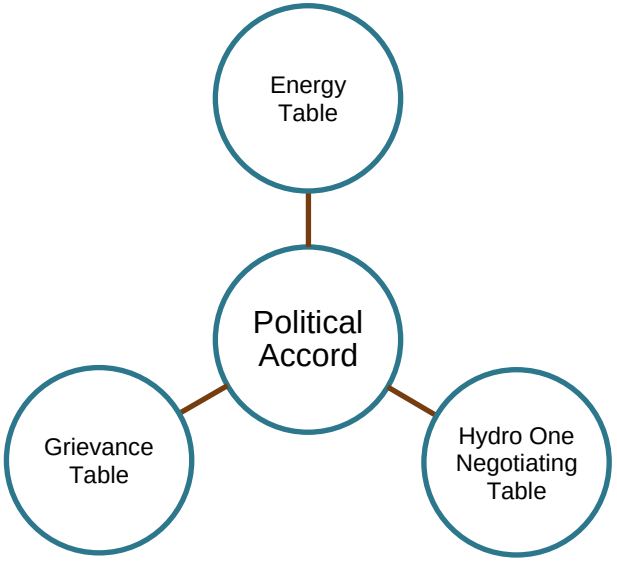
- The LDC Affordability Fund addresses a real need.
  - LDCs have expressed the need for an additional tool to provide assistance to their customers.
- Determining allocation of funds to LDCs:
  - Some LDCs may have a disproportionate number of customers in need of assistance; and
  - ENERGY is proposing to establish a Working Group, including the OEB, LDCs and potentially low income organizations to help develop funding criteria and allocation.
- LDCs need flexibility to target customers:
  - Not all customers who are in need will actively seek help;
  - Some customers in arrears may be "gaming the system" and not truly in need; and
  - LDCs recommend targeted outreach as opposed to broad marketing; a high volume of applications would limit the ability to deliver assistance to customers who need it most.

Fiscal Impact

- The LDC Affordability Fund would represent a fiscal impact of $200 million in fiscal year (FY) 2016/17.
- To allow for funds to flow in FY 2016/17, ENERGY would sign a Transfer Payment Agreement (TPA) with one or several LDCs to administer the Fund and transfer money before end of fiscal year.
- There is a fiscal risk if monies used for the Fund do not flow before FY year-end 2016/17 and for monies that are sitting in Hydro One at year-end (because of consolidation with province), and a corresponding fiscal pressure in the following years when the funds are flowed from Hydro One (H1) to ratepayers.

D. Implementing On-Reserve First Nations Delivery Credit

- ENERGY has a number of Tables with the Chiefs of Ontario (COO) and First Nations that include the Energy Table to discuss policy issues, the Hydro One Negotiating Table to discuss Hydro One shares, and the Grievance Table.
- The Grievance Table process was established at the request of COO as a means to avoid litigation to resolve historic grievances related to the energy sector and prevent these issues from impeding progress on broadening the ownership of Hydro One (H1).
- The cost of electricity and delivery charges were identified as the prevailing grievance at the First Nations-Ontario Energy Table meeting in Timmins in 2016, and the Minister of Energy agreed to explore options for a First Nations Rate through the Grievance Table process.



- In June 2016, following discussions on Hydro One shares and rates at COO's All Chiefs Conference, the Minister of Energy issued a letter directing the OEB to prepare a report providing "*advice on options for an appropriate electricity rate (or rate assistance) for on-reserve First Nations electricity consumers*".
  - OEB engaged with First Nations, including remote communities, the distributors serving them, and consumer groups such as the Low Income Energy Network. It also established an Advisory Committee with the Chiefs of Ontario's Grievance Committee.
- The Ontario Energy Board (OEB) has worked with COO to engage with First Nations to develop options for a First Nations electricity rate. The OEB provided a report to the Minister on December 29, 2016.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- On-reserve First Nations customers face unique challenges that impact electricity affordability, such as the poor quality of the housing stock on-reserve. These challenges result in significantly higher electricity consumption levels and costs.
- First Nations living on reserve are particularly vulnerable low-income consumers: the average income is considerably lower compared to First Nations living off reserve and compared to non-Indigenous populations:
  - Average income of First Nations on reserve in Ontario: $21,100;
  - Average income of First Nations off reserve in Ontario: $31,527;
  - Average income of Non-Indigenous people in Ontario: $42,506; and
  - Median incomes on smaller reserves can fall below $10,000 (e.g., Cat Lake FN).
- Employment rates also differ between on-reserve First Nations, off-reserve First Nations and Non-Indigenous individuals, as well as other indices of social vulnerability:
  - 54% of Indigenous people over 15 years old and living on-reserve in Ontario are unemployed or not in the labour force;
  - The on-reserve unemployment rate is 18.3% compared to 6.4% in Ontario generally; and
  - 67% of families residing on-reserve are single parent families, compared to the Canadian equivalent of 19%.
- First Nations are seeking redress for historic grievances related to lands affected by energy developments, such as transmission or distribution infrastructure built on reserve lands and traditional territories where, in some cases, they may not have been appropriately consulted.
- Further, in some circumstances, linear infrastructure corridors cut First Nation reserves in half, significantly disturbing the use and management of an already small land base; the First Nation communities disturbed by the energy infrastructure report having experienced long wait times (e.g., 20 years) for their communities to get connected and receive the benefits of the energy derived from the local infrastructure.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
  - Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate;
    - The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of $13 to $20 million or 11 cents a month for a typical residential electricity consumer.
  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
  - Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.

- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.

- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

D. Implementing On-Reserve First Nations Delivery Credit (cont'd)

- The OEB report to the Minister of Energy on a First Nation on-reserve rate recommended:
  - Eliminate the delivery charge for all on-reserve First Nations residential customers and eliminate the monthly service charge for customers of licensed distributors which charge a bundled rate;
    - The OEB estimates this would provide residential customers an average monthly benefit of $85 at a total annual cost of $13 to $20 million or 11 cents a month for a typical residential electricity consumer.
  - Automatically qualify on-reserve First Nations residential customers (~21,500 customers);
  - Enable greater information sharing between distributors and band councils to identify all on-reserve First Nations customers; and
  - Continue to provide assistance through OESP and LEAP to eligible on-reserve First Nations customers.
- The OEB suggested the program should be funded from the tax base as it is targeted to a particular segment of the provincial population, or, if rate based, to use a province-wide charge.
- ENERGY recommends moving forward with the implementation of the OEB's recommendations as part of the wider electricity rate relief package and as the Hydro One share agreement with COO continues to be implemented.

Distributor	Number of On-Reserve Residential Customers
Algoma Power Inc.	473
Attawapiskat Power Corporation	336
Bluewater Power Distribution Corporation	237
Cat Lake Power Utility Ltd.	80
Cornwall Electric Distribution	514
Hydro One Networks Inc.	16,679
Hydro One Remote Communities Inc.	2,579
PUC Distribution Inc. (Sault Ste. Marie)	264
Thunder Bay Hydro Electricity Distribution	332
Total Number of Customers	**21,494**

Source: OEB Report to Minister: Options for an Appropriate Rate Assistance Program for On-Reserve First Nations Electricity Consumers (Page 5).

D. Implementing On-Reserve First Nations Delivery Credit – Considerations

- Legislative and regulatory will be required to implement this program.
- The OEB will need to work with the LDCs to identify on-reserve consumers to administer the delivery rebate.
- Development of a communications plan containing the following elements:
  - Public release of the OEB report;
  - Commitment to working with LDCs on implementation details; and
  - Advanced notice to the OEB and COO regarding the ministry's decision to move forward on the OEB's recommendation and indicate a willingness to work collaboratively with COO on ways in improve community-LDC communication to ease implementation.
- The rebate will appear on customer's electricity bills, either as a specific line item or a communicated call-out.
- Recipients would continue to be eligible for programs such as the Ontario Electricity Support Program (OESP) and the Low-Income Electricity Assistance Program (LEAP).
- There is a risk that either non-status Indigenous communities without reserves or Métis could challenge the program on the grounds that it discriminates against them contrary to section 15 of the Charter. This risk is mitigated by the ameliorative purpose of the program and because targeting First Nations communities for a reserve-based program corresponds to the distinct circumstances of reserve-based communities, relative to other Indigenous communities. A genuinely ameliorative program that targets some people but excludes others is shielded from a s. 15 challenge if it serves or advances the ameliorative goal.

Fiscal Impact ($M)	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**
On-Reserve First Nation Delivery Credit	-	20	20	20	20

Fiscal Roll-Up

Fiscal Impact ($M)*	16-17	17-18	18-19	19-20	20-21
RRRP Enhancements**	-	454	450	446	444
Ontario Electricity Support Program, including the 50% Enhancement (**Note:** The fiscal impact does not include adding new categories to the OESP matrix. ENERGY will work with the OEB to forecast what the total costs could be)	-	178	239	290	334
On-Reserve First Nation Delivery Credit	-	20	20	20	20
LDC Affordability Fund***	200	-	-	-	-
Total	200	652	709	756	798

***Note:** GA Smoothing does not have a fiscal impact because it is assumed that both legal authority and accounting treatment are met. See GA Smoothing – Fiscal Considerations for fiscal impact of GA smoothing if legal and accounting treatment not met.

****Note: Note:** Current regulatory framework calls for RRRP to increase by average distribution rate increase. Forecast assumes 2.6% annually though is subject to OEB proceedings. Does not include Algoma Power or Hydro One Remotes which would continue to be on the rate base. Fiscal projection is subject to consumer consumption patterns that may change due to extreme weather or other factors. Costs will decrease through 2023 due to rate making changes and are expected to increase post 2023 due to regular rate increases.

*****Note:** Funding for the LDC Affordability Fund is one-time in 2016/17.

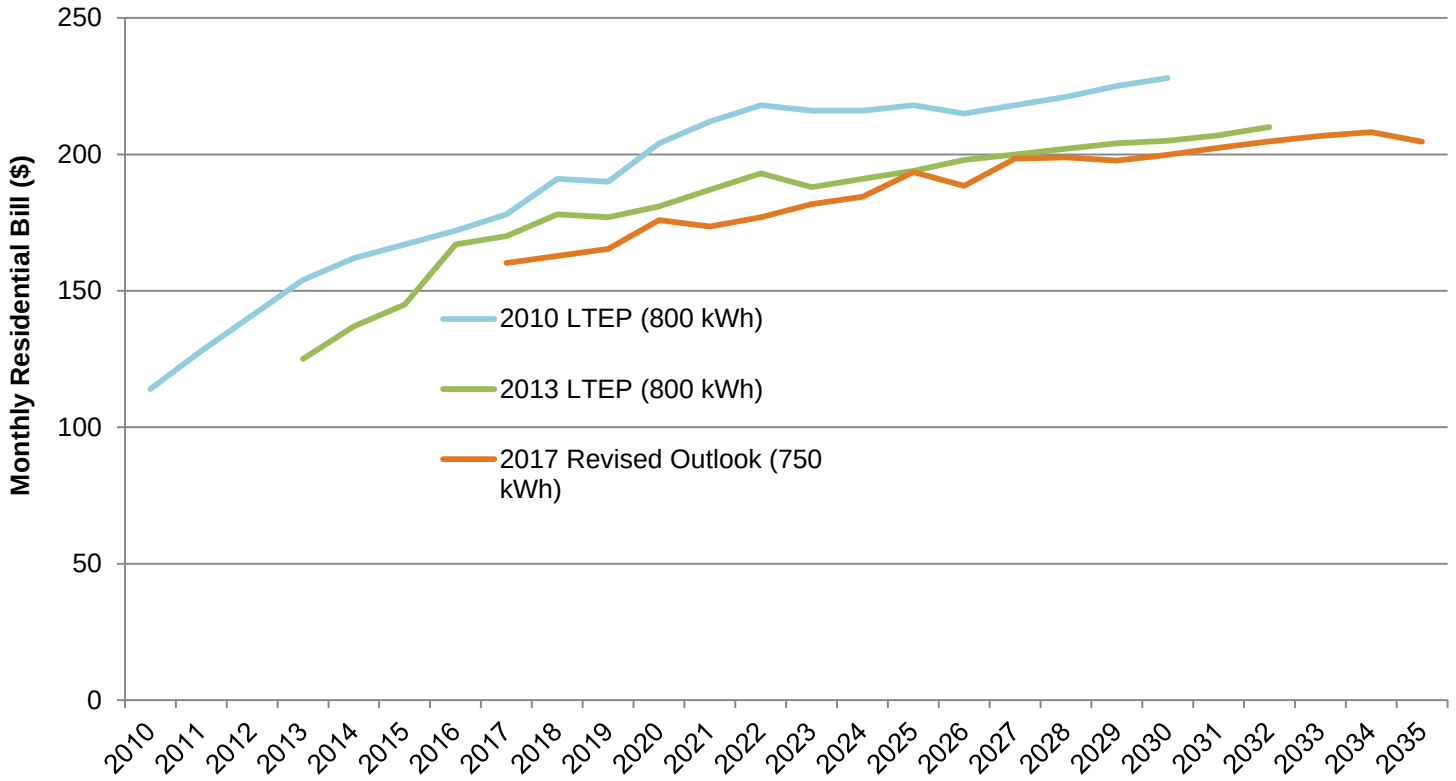
BENDING THE FUTURE COST CURVE OF ELECTRICITY

Existing Rate Mitigation Actions To Bend The Cost Curve

- Since 2013, the government has taken a number of actions to reduce electricity ratepayer costs, including:
  - Renegotiating the Green Energy Investment Agreement to reduce contract costs by $3.7 billion.
  - Reducing Feed-In Tariff (FIT) prices saving ratepayers at least $1.9 billion.
  - Introducing a competitive Large Renewable Procurement (LRP) process to drive down costs approximately $1.5 billion lower than the 2013 LTEP forecast.
  - Deferring the construction of two new nuclear reactors at Darlington, avoiding an estimated $15 billion in new construction costs.
  - Maximizing the value of our existing nuclear fleet by starting Bruce refurbishments in 2020 instead of 2016, thus helping to achieve $1.7 billion in savings and by continuing to operate Pickering up to 2024, pending regulatory approvals, which could save ratepayers about $600 million.
  - Suspending the second round of the LRP process and the Energy-from-Waste Standard Offer Program, which is expected to save up to $3.8 billion in costs.

Existing Rate Mitigation Actions To Bend The Cost Curve (cont'd)

- The chart below shows how electricity rate forecasts have trended down over time.



Sources: *2010 LTEP (800 kWh/month); 2013 LTEP (800 kWh/month); Revised Ontario Planning Outlook (750 kWh/month as of December 2016) which includes: ICI expansion, RRRP update, 8% rebate, HQ agreement, suspension of LRP II and EFWSOP.*

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A. OEB – LDC Efficiencies and Rates

Leveraging the OEB

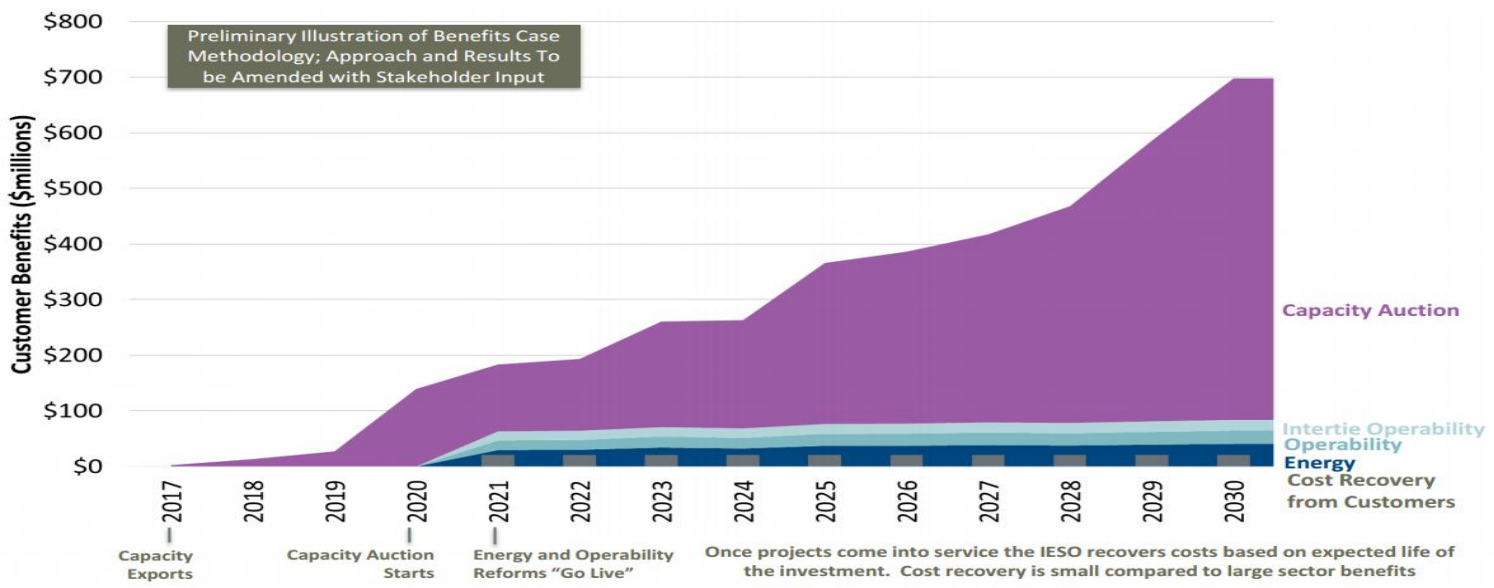
- The Ontario Energy Board (OEB) has a mandate to regulate the electricity distribution sector in the public interest, ensuring the financial viability of the sector while promoting reliable service to customers at just and reasonable rates.
- The OEB, through the Renewed Regulatory Framework for Energy (RRFE), has since 2012 attempted to move the distribution sector towards a performance/outcomes-based regulatory framework.
  - While new reporting requirements such as the LDC performance scorecard are positive developments, RRFE does not tie these system performance expectations to LDC financial performance.
- Encouraging shared partnerships on services between utilities will help reduce costs in the back end and encourage further innovation for small to medium sized utilities.
- In 2012, the government asked the Ontario Distribution Sector Review Panel to make recommendations about how the distribution sector could become more efficient. The Panel concluded that a $1.2 billion net present value in savings could be achieved by consolidating LDCs into 8-12 regional entities.

Opportunities

- ENERGY could help promote and accelerate these efforts by asking the OEB to look at opportunities to further drive LDC efficiencies and productivity. This may indirectly incent LDC consolidation.
- In parallel, the OEB could be instructed to review business cases behind its own regulatory requirements to reduce “red tape” and eliminate costs that LDCs indicate are creating pressures on operating expenses.
- This could be done through the Minister's letter, the LTEP Implementation Directive, s. 35 of the *Ontario Energy Board Act, 1998*, and/or the 2017 Mandate Letter and other agency business planning processes.

B. IESO – Market Renewal

- Continue to move forward with Independent Electricity System Operator's (IESO) Market Renewal initiatives:
  - Moving to "technology-agnostic" procurements will provide new opportunities for innovation and modernization and ensure ratepayers receive the best prices possible.
  - Market Renewal encompasses projects such as a single-schedule system (from the current two-schedule system), more frequent intertie scheduling to better align with other jurisdictions and a day-ahead market. There will be up front capital costs to enable the initiative. IESO is currently assessing these costs.
- Changes related to IESO's Market Renewal initiatives, reflected in HOEP and uplifts, are estimated to save up to $300 million per year, starting in 2021, leading to a reduction of:
  - About $1/month or less than 1% at current retail prices for a typical residential bill; and
  - About $1.30/MWh at current all-in prices for industrial and SME electricity consumers.



GLOBAL ADJUSTMENT (GA) SMOOTHING

Overview – GA Smoothing

- The Global Adjustment (GA) has risen over the past decade as the province's electricity system has decarbonized.
  - The vast majority of GA costs now stem from greenhouse gas (GHG) emissions-free renewable and nuclear generation facilities, as well as natural gas plants that were constructed to restore system reliability and replace coal-fired capacity.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing, and fixed operations costs. The GA recovers these fixed costs of running the province's generation fleet, as well as the cost of conservation programs.
- The majority of the province's electricity generators are under 20-year contracts and account for less than half of the GA. Some of these generators will continue to provide value to the electricity system beyond their contract lives (i.e., beyond 20-years).
  - There is an opportunity to recognize the long-term benefit of these assets to the electricity system and "bring forward" that benefit for ratepayers today by deferring some of the current costs.
  - GA Smoothing would spread these costs over a longer period and provide immediate ratepayer relief (i.e., similar to re-financing a mortgage). By recognizing that generation assets are expected to continue to provide residual benefit to future ratepayers, beyond the term of current contracts, future ratepayers are expected to be able to utilize these assets and reduce the need to finance the development of new generation assets.
- The GA Smoothing options under consideration are illustrative and show potential rate mitigation measures to meet a targeted 25%, 20% and 18% reduction from the projected residential bill in 2017.
  - These residential impacts are based on a forecast for a household connected to Toronto Hydro that consumes 750 kWh per month.
  - Actual ratepayer savings would vary due to differences in consumption patterns.
  - Targeted to residential and small business customers (RPP).

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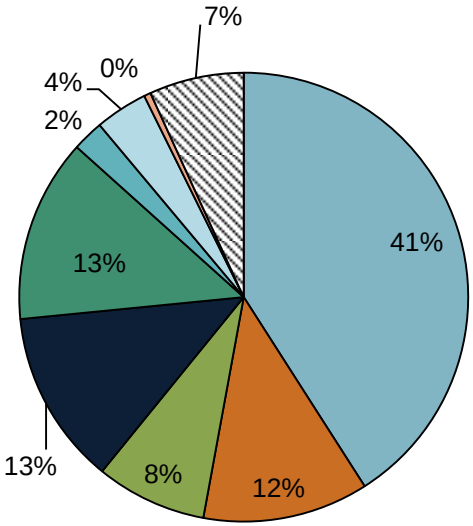
GA Smoothing – Cost Breakout

- The Global Adjustment (GA) accounts for the fixed costs, including capital costs, of running Ontario's generation fleet, as well as the cost of conservation programs. The GA is instrumental in maintaining a reliable electricity system by ensuring that sufficient generating capacity is available.
  - Generators in Ontario received contracted or regulated rates, which are typically designed to recover capital, financing and fixed operations costs. Most generators are on 20-year contracts with the exception of hydroelectric and nuclear plants. They operate on longer contracts (or are regulated on a cost-of-service basis by the OEB) in recognition of the much longer operating lives of these facilities.
- Chart below shows the breakout of the GA by generator and program types. In 2016, the GA costs were $12.3 billion. These costs will evolve over time as 2,181 MW of previously contracted generation comes online in the coming years.

2016 GA Cost: $12.3 billion



	GA ($M)
Nuclear	5,053
Hydro	1,473
Natural Gas	985
Wind	1,552
Solar	1,630
Biomass, Landfill and Byproduct	278
Conservation	467
IEI Program	60
OEFC*	842

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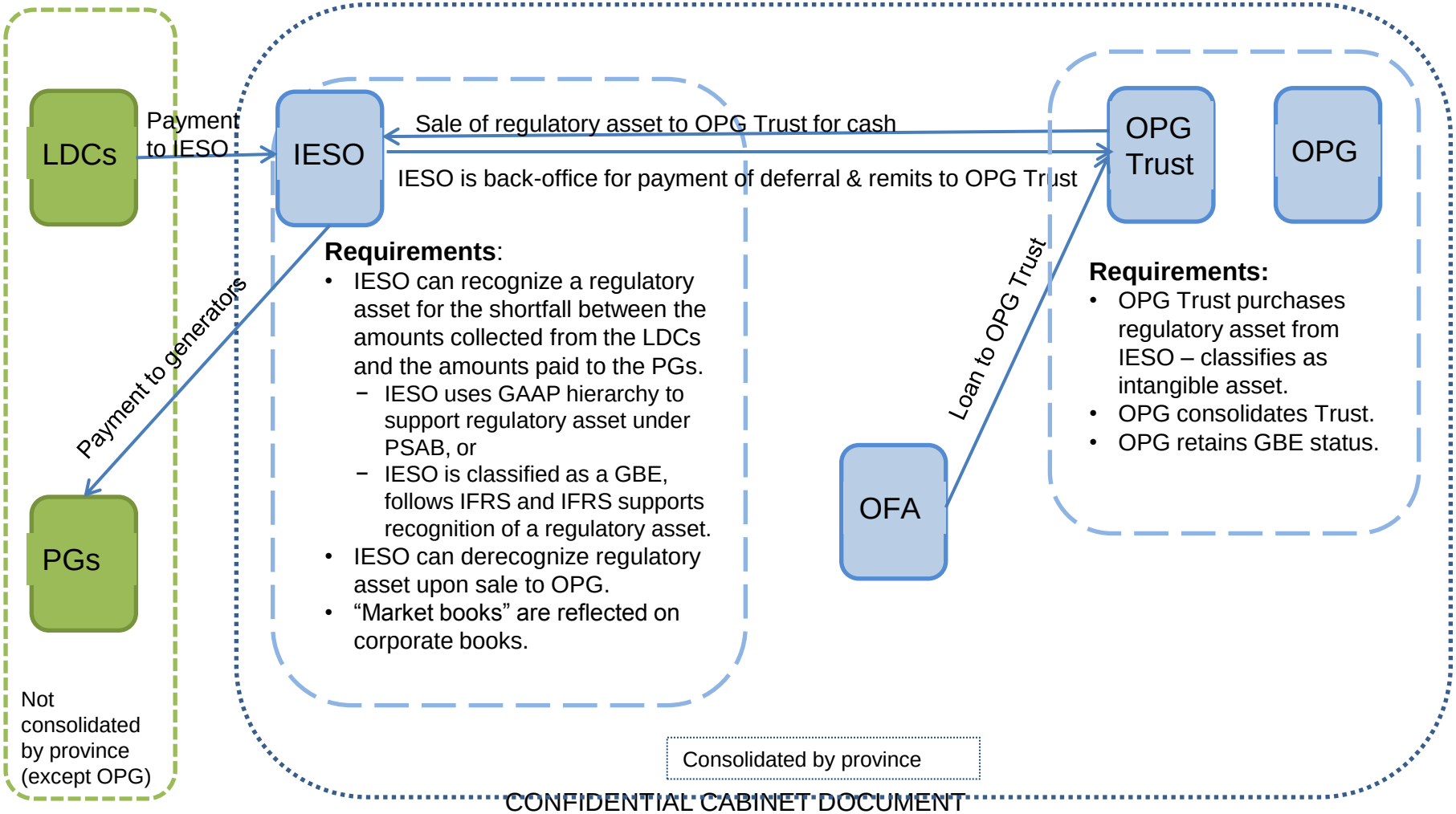
***Note:** OEFC indicates the cost of generator contracts managed by the OEFC which include contracts for natural gas, hydro and biomass generators.

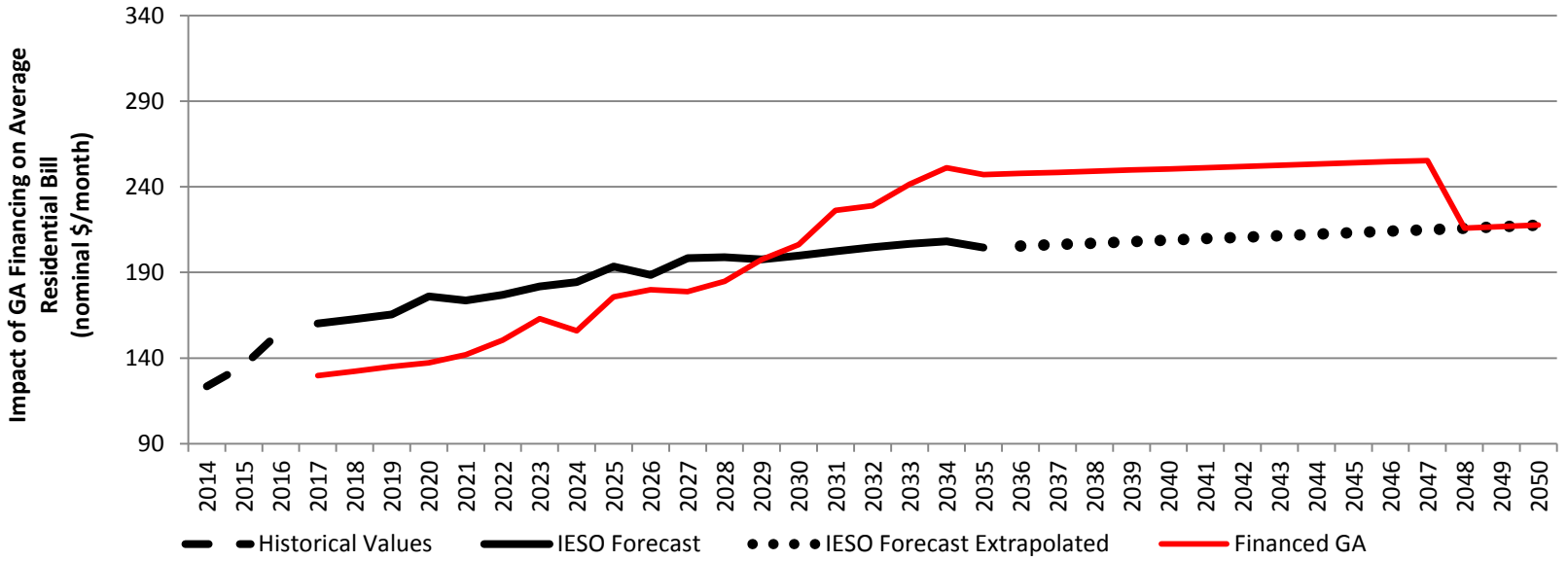
**** Note:** Conservation measures, not quantified here, serve to reduce Ontario energy demand. Actual electricity generation would be larger than 155 TWh in the absence of conservation programs.

A. GA Smoothing – Potential Structure

- The following diagram provides an overview of a potential GA smoothing structure, as well as interactions between sector entities and elements required to meet accounting objectives.



B. Option 1: GA Smoothing for RPP Only (Borrow $2.2 billion in 2017, Residential Bills Lowered 25%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-27.0	-26.9	-26.9	-34.3	-28.1	-23.5	-16.6	-25.2	-15.7	-7.5	-17.4	-12.4	-0.1	5.7	21.1	21.4	30.7	38.1	37.6	37.5	37.3	37.2	37.0	36.8	36.7	36.5	36.4	36.2	36.1	35.9	35.8	0.0
Total Accumulated Debt *($ billion)*	2.2	4.6	7.0	10.2	13.1	15.7	17.8	20.8	23.2	25.0	27.7	30.1	31.7	32.8	32.7	32.6	31.7	30.1	28.4	26.6	24.8	22.8	20.8	18.6	16.3	13.9	11.4	8.8	6.0	3.1	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	2.2	2.3	2.4	3.2	2.8	2.6	2.2	3.0	2.4	1.8	2.7	2.4	1.6	1.1	-0.1	-0.1	-0.9	-1.6	-1.7	-1.8	-1.9	-2.0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.8	-2.9	-3.1	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $3.2 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 1: GA Smoothing for RPP Only – Residential Bills Lowered 25% (with Tax-Base Funded 8% Rebate and Social Programs, 2% increase)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

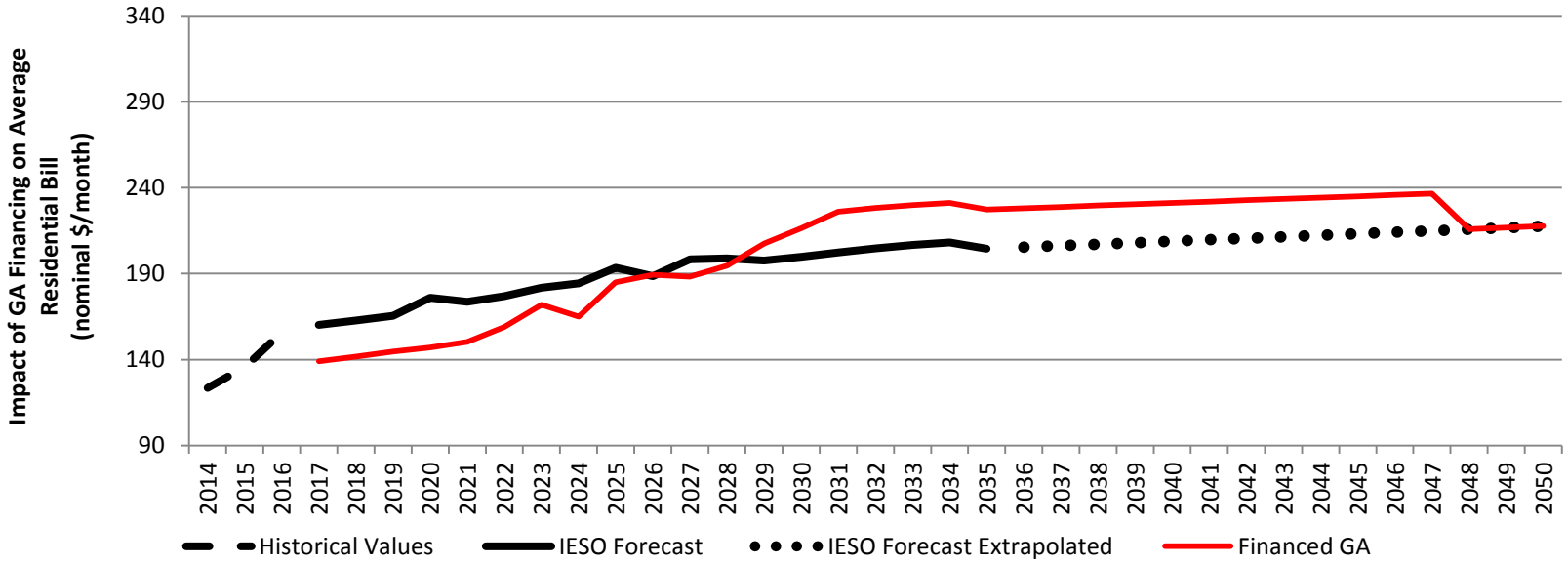
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-27	-27	-27	-34	-29
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		123	126	128	131	133
8% rebate		-10	-10	-10	-10	-11
HST		16	16	17	17	17
Revised Bill (includes HST)	**163**	**129**	**132**	**135**	**137**	**140**
Year-over-Year Change		-21%	2%	2%	2%	2%
Change from Forecast		**-25%**	**-25%**	**-24%**	**-28%**	**-25%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-18.8	-18.6	-18.4	-25.6	-20.5	-15.8	-8.8	-17.2	-7.5	0.9	-8.9	-3.7	8.7	14.7	20.9	20.7	20.6	20.4	20.2	20.1	20.0	19.9	19.8	19.7	19.7	19.6	19.5	19.4	19.3	19.3	19.2	0.0
Total Accumulated Debt *($ billion)*	1.6	3.2	4.9	7.2	9.3	11.0	12.3	14.4	15.7	16.5	18.0	19.3	19.5	19.3	18.6	17.8	17.0	16.1	15.2	14.3	13.3	12.2	11.1	10.0	8.7	7.5	6.1	4.7	3.2	1.6	0.0	0.0
Total Change in Accumulated Debt *($ billion)*	1.6	1.6	1.7	2.4	2.1	1.8	1.3	2.0	1.4	0.7	1.6	1.2	0.3	-0.2	-0.7	-0.8	-0.8	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-1.6	0.0

Notes: Assumes 30 year financing period and a nominal interest rate of 5% (compounded monthly). Ratepayer GA payments increase annually beyond 2021 at the rate of inflation with a limit of $1.7 billion above the true cost of GA in any given year. IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

B. Option 2: GA Smoothing for RPP Only (Borrow $1.6 billion in 2017, Residential Bills Lowered 20%)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

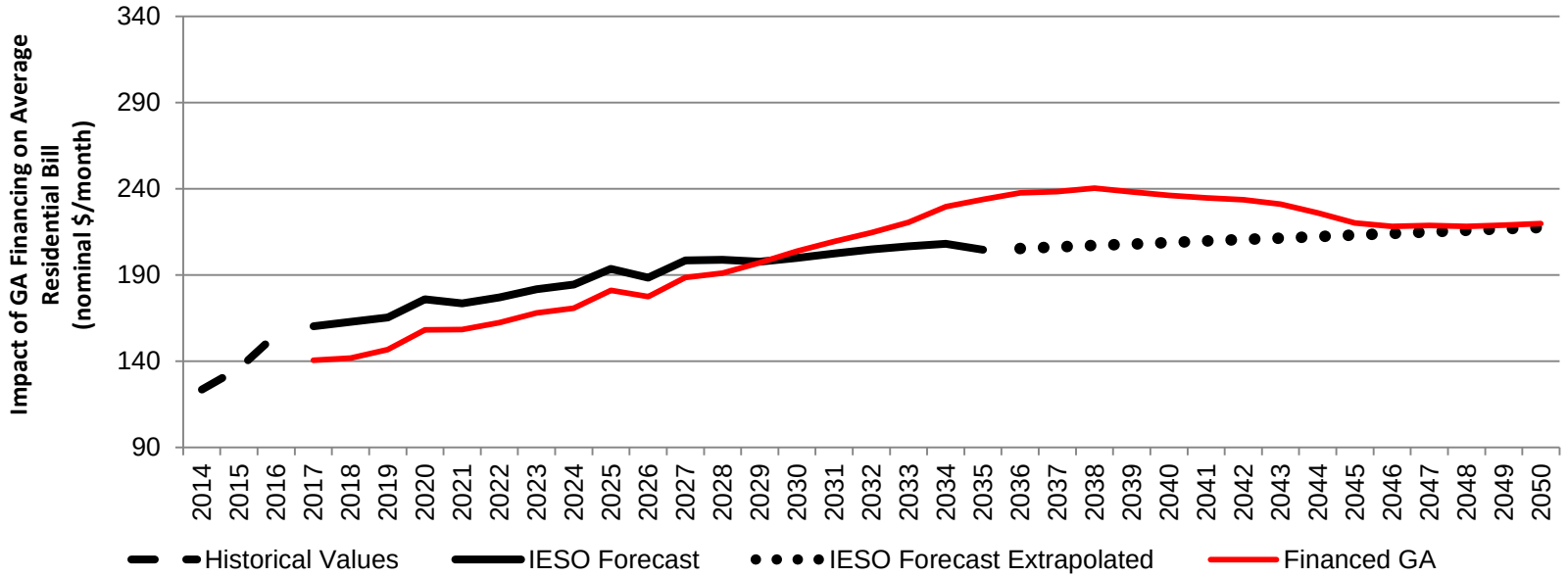
Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-19	-19	-18	-26	-21
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		131	134	137	139	142
8% rebate		-11	-11	-11	-11	-11
HST		17	17	18	18	18
Revised Bill (includes HST)	**163**	**138**	**141**	**144**	**146**	**149**
Year-over-Year Change		-16%	2%	2%	2%	2%
Change from Forecast		**-20%**	**-20%**	**-19%**	**-23%**	**-20%**

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

B. Option 3: GA Smoothing for RPP Only (Borrow $1.4 billion in 2017, Residential Bills Lowered 18%)



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Average Monthly Residential Bill Impact pre-tax *($/month)*	-17.5	-18.5	-16.6	-15.7	-13.5	-12.9	-12.2	-12.2	-11.0	-9.7	-8.8	-6.9	-0.6	3.4	6.2	8.6	12.2	19.0	25.8	28.4	28.4	29.5	26.8	24.2	22.2	20.4	17.3	12.2	6.2	3.7	3.3	2.0
Total Accumulated Debt *($ billion)*	1.4	3.1	4.6	6.1	7.5	9.0	10.4	12.0	13.5	15.0	16.5	17.9	18.8	19.5	20.0	20.3	20.3	19.8	18.5	17.0	15.5	13.7	12.1	10.6	9.1	7.8	6.7	5.9	5.7	5.6	5.6	5.7
Total Change in Accumulated Debt *($ billion)*	1.4	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.4	1.0	0.7	0.5	0.3	0.0	-0.6	-1.2	-1.5	-1.6	-1.8	-1.6	-1.5	-1.4	-1.3	-1.1	-0.7	-0.3	-0.0	-0.0	0.1

Notes: Assumes financing of all non-nuclear IESO contracts for an additional 10 years beyond the life of each contract and 15 year financing of the conservation cost in any given year. Assumes a a nominal interest rate of 5% (compounded monthly). IESO forecast is based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. RPP does not include customers on retail contracts.

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B. Option 3: GA Smoothing for RPP Only – Residential Bills Lowered 18% (with Tax-Base Funded 8% Rebate and Social Programs)

- Total bill below is based on a revised IESO forecast. See footnotes for more information.

Residential (750 kWh/month)	Actual 2016	2017	2018	2019	2020	2021
Total Bill (includes HST)	**163**	**172**	**175**	**178**	**189**	**187**
Total Bill (excludes HST)	145	153	155	158	168	165
Impact of GA Financing		-17	-18	-17	-16	-13
Impact of Tax-Basing Social Programs		-2	-2	-2	-3	-3
Subtotal		134	135	139	149	149
8% rebate		-11	-11	-11	-12	-12
HST		17	17	18	19	19
Revised Bill (includes HST)	**163**	**140**	**141**	**146**	**157**	**156**
Year-over-Year Change		-14%	1%	4%	7%	-1%
Change from Forecast		-18%	-19%	-18%	-17%	-17%

Commercial & Small Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class B Total (excludes HST)	**160**	**165**	**160**	**162**	**173**	**169**
Class B Revised Total (excludes HST)	**160**	**162**	**157**	**159**	**170**	**166**
Year-over-Year Change		1%	-3%	1%	7%	-2%
Change from Forecast		-2%	-2%	-2%	-2%	-2%

Large Industrial ($/MWh)	Actual 2016	2017	2018	2019	2020	2021
Class A Total (excludes HST)	**90**	**91**	**93**	**88**	**95**	**96**
Class A Revised Total (excludes HST)	**90**	**88**	**90**	**84**	**92**	**93**
Year-over-Year Change		-2%	2%	-6%	9%	1%
Change from Forecast		-4%	-4%	-4%	-4%	-4%

Notes: Based on IESO's revised OPO forecast as of December 2016. Includes the cancellation of LRP II and EFW, expansion of ICI. Does not include smoothed OPG rates. Above residential bill is based on a 750 kWh per month Toronto Hydro customer. Above Class B estimate based on a 1 MW customer connected to Toronto Hydro, assumes delivery charge escalates as per residential forecast. "Social programs" refers to existing RRRP and OESP. While initiatives would take several months to implement, the above estimate for 2017 reflects a full-year impact. The 8% rebate above represents savings compared to status quo due to the reduction in the sub-total from GA financing. RPP does not include customers on retail contracts.

GA Smoothing – Accounting Considerations

- Analysis is not complete; several requirements (below) are high risk re: satisfactory resolution.
- Complexity of the structure, including the number of entities involved increases risk in and of itself.
- If all requirements can be met, an accounting analysis can be supported that results in: (1) no fiscal impact; and (2) no increase in net debt.
- IESO requirements – IESO mgmt, KPMG (Energy advisor and IESO auditor), OPCD and EY (OPCD advisor) are evaluating accounting risks:
  - IESO can recognize a regulatory asset for the shortfall between the amounts collected from the LDCs and the amounts paid to the PGs;
    - IESO uses GAAP hierarchy to support regulatory asset under PSAB; or
    - IESO is classified as a GBE, follows IFRS and IFRS supports recognition of a regulatory asset.
  - IESO can derecognize regulatory asset upon sale to OPG; and
  - "Market books" are reflected on corporate books.
- OPG requirements – OPG mgmt, PwC (OPG auditor), KPMG (Energy advisor), and OPCD are evaluating accounting risks:
  - OPG Trust purchases regulatory asset from IESO – classifies as intangible asset;
  - OPG consolidates Trust; and
  - OPG retains GBE status.
- No discussion with OAG; in previous Annual Reports, the OAG has raised concerns about the appropriateness of recognizing rate regulated assets and liabilities.

GA Smoothing – Legal Considerations

- The current GA amount paid by consumers is a regulatory charge. One of the requirements of a valid regulatory charge (as opposed to a tax) is that the person paying the charge either benefits from the regulatory scheme or causes the need for regulation.

- In principle, refinancing the GA to spread the costs of generation and conservation assets over the useful life of the assets presents only a low risk of being a tax, as each cohort of consumers pays for a proportion of the GA cost roughly equal to the proportion of the benefit they receive from the useful life of the assets.

- A proposal for refinancing the GA that appears to cross-subsidize near-term consumers at the expense of long-term consumers by back-loading costs more than if costs were spread equally over the estimated lifespan of generation and conservation assets presents a moderately high risk (more likely than not) of constituting a tax.

- Were the charge characterized as a tax, in the event of a challenge, it would be struck down by a court as unconstitutional and consumers would be entitled to recover their payments. This risk could be eliminated, either up front or retroactively, by the imposition of a valid tax.

GA Smoothing – Policy Considerations

- Borrowing money to smooth the Global Adjustment (GA), while lowering costs in the short term, results in a more rapid rise in electricity prices beyond the rate of increase already expected.
  - In addition, should Ontario electricity demand be lower than forecasted, the cost of paying off the debt will be spread over a smaller pool of consumption, further increasing future costs for individual ratepayers.

- The impacts are also based on a GA forecast. Since the GA fluctuates, actuals will vary based on demand, the addition of new generation and natural gas prices.
  - A "true-up" mechanism will be required to account for the difference between the "estimate" and "actual" GA costs.

- If Class B electricity consumers, such as commercial and small industries, do not receive the benefit of GA Smoothing (i.e., because it is only targeted to RPP consumers) – consideration could be given to provide tax-based measures to off-set electricity costs (e.g., tax-credits, programs, etc).
  - Class B consumers have raised concerns about the cost of electricity and its impact on their business competitiveness.
  - Government is developing an option that would provide rate relief for Class B consumers.

- Given the legal framework the amount of GA smoothing needs to be proportionate to the generating contracts (i.e., 20-year) and the additional years of generation services still available (i.e., additional 10-years of service).

- Rating agencies and investors in the Province's debt may view this borrowing as an obligation of the Province, regardless of accounting treatment. Depending on the magnitude of the debt to be incurred could have an impact on the Province's borrowing cost.

GA Smoothing – Fiscal Considerations

- If the proposed legal and accounting treatment of the GA financing smoothing proposal is not implemented, there could be a negative impact on the province's fiscal plan, as shown below.

- The table below shows the projected fiscal savings /costs related to GA smoothing Options 1 and 2 under these two legal/accounting treatment scenarios

Fiscal Impact ($M)	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
Without Proposed Legal/Accounting Treatment					
Option 1 - Bills Lowered by 25%, RPP Only*	2,266	2,372	2,633	3,096	2,775
Option 2 - Bills Lowered by 20%, RPP Only*	1,574	1,632	1,844	2,282	1,988
Option 3 - Bills Lowered by 18%, RRP Only*	1,487	1,585	1,524	1,503	1,429

*Numerical values represent amount borrowed in indicated fiscal year plus accumulated interest from previous year's accumulated debt

Source: Ministry of Energy

Legislative Authority – Considerations

1. Electricity Support Programs

- **RRRP, OESP and First Nations Rate:** Moving costs to the tax base and creating a First Nations rate will require amendments to OEBA. Regulatory amendments (442/01, 314/15, 275/04) will be required to address program details.

- **LDC Affordability Fund (2c):** In order to implement new LDC affordability fund the Province would need to enter into Transfer Payment Agreements with qualified third parties to administer the fund.

2. Bending the Future Cost Curve of Electricity

- No specific legislative or regulatory amendments identified. IESO may need to amend market rules. Agency MOUs/MOAs may require amendment.

3. GA Smoothing

- **Amendments to *Electricity Act, 1998* (EA) and *Ontario Energy Board Act, 1998* (OEBA)**
  - The EA allows the Lieutenant Governor in Council to cause an OPG Holdco to be created under the *Business Corporations Act.*
  - The mandate and governance of the Financing Subsidiary will be addressed through amendments to the EA. Governance provisions will be designed to address the accounting control indicators.
  - The Financing Subsidiary will require authority to recover principle, interest and administrative costs through GA from customers.
  - Legislation would authorize IESO to collect amounts on behalf of the Financing Subsidiary and settle accounts with the Financing Subsidiary as a service provider. Regulatory amendments to GA Regulations would require IESO to:
    - Separately settle and track amounts received from the Financing Subsidiary to lower GA (including maintaining variance accounts).
    - Separately settle and track amounts paid back to the Financing Subsidiary (including maintaining variance accounts).
    - Distributors would continue to collect from consumers and settle with IESO. Generators would continue to be paid by IESO.
  - OEBA-related amendments would allow for OEB oversight. Light touch would focus on the borrowing entity's recovery of administrative costs and its calculation of amounts owing in a period. Heavy touch would give OEB the discretion to determine repayment over time.
  - The certainty of the legislative mechanism to recover the debt and interest, and the extent of discretion of the OEB to alter either amount over time, will have impacts on the availability and cost of capital.
  - Further legal analysis is required as the GA option is developed.

Communication Plan

Objective:

- Demonstrate Ontario's commitment to lower electricity costs for ratepayers through new rate relief initiatives.

Strategic Approach

- High-profile Premier's announcement.
- News release, backgrounders, QA's are being prepared.
- A multimedia marketing and advertising campaign is being prepared on the topic of rate mitigation for electricity consumers.

From: Ken Kandeepan
To: Gadi Mayman; Ronald Kwan; Mike Manning
Cc: Christina Zhang; Gavin He
Subject: RE: Globe and Mail article from Ivey on intellectual rationale for GA smoothing
Date: Tuesday, February 28, 2017 9:58:11 AM

Thanks Gadi, read the article, very interesting and the second option listed is very similar, i.e., the use of debt to smooth the electricity bill with the debt incurred to be paid down by slightly higher prices in the future.

Ken K

-----Original Message-----
From: Gadi Mayman
Sent: Tuesday, February 28, 2017 9:47 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Christina Zhang <Christina.Zhang@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: Globe and Mail article from Ivey on intellectual rationale for GA smoothing

You might find this interesting if you haven't seen it. Ron, this is the article that was being referred to at our 8am meeting.

https://app.infomart.com/newsletter/view-article/3722/4303/0/fold%7C13147%7C9978013

From:	Ronald Kwan
To:	Gadi Mayman; Ken Kandeepan; Mike Manning
Cc:	Christina Zhang; Gavin He
Subject:	RE: Globe and Mail article from Ivey on intellectual rationale for GA smoothing
Date:	Tuesday, February 28, 2017 9:53:15 AM

Hi Gadi,

I recall a similar article earlier this or last month too.

Ron

-----Original Message-----
From: Gadi Mayman
Sent: February-28-17 09:47
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
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Cc: Christina Zhang <Christina.Zhang@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: Globe and Mail article from Ivey on intellectual rationale for GA smoothing

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https://app.infomart.com/newsletter/view-article/3722/4303/0/fold%7C13147%7C9978013

From:	Hanslep, Malle (MOF)
To:	Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Michael Waterston (MOF)
Subject:	RE: Guarantee
Date:	Saturday, April 22, 2017 10:32:27 AM

Hi Gadi,
I was thinking about the approach further and I think it would be best if I write to Len Hatzis (legal director at TBS) and Carolyn (so she is aware) first to let Len know the background that the DM of TBS is in favour of the Minister of Finance signing any required guarantee (although maybe he is well aware of this already) and also MOF/OFA view that we shouldn't exempt generally transactions under the new proposed Act from s. 28.
Then Len can let me know which TBS counsel are working on it as I think that it may be Nick and Paul but don't know for sure and don't know what their involvement on this file has been and I don't think I should send the email to TBS without letting Carolyn know.
]Malle

From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: April-21-17 8:07 PM
To: Hanslep, Malle (MOF); Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Waterston, Michael (MOF)
Subject: Re: Guarantee
Thanks, Malle, if you wouldn't mind sharing it with Nick or Paul, that'd be great.
Gadi

From: Hanslep, Malle (MOF) <Malle.Hanslep@ontario.ca>
Sent: Friday, April 21, 2017 7:54:48 PM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Hi Gadi

I think that would be fine. I don't know who in particular at TBS legal might be looking at this although it might be Nick Smook and Paul Kaufman

Malle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Gadi Mayman
Sent: Friday, April 21, 2017 19:05
To: Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Subject: Re: Guarantee

Thanks. Just a question, would it make sense to share your response to Energy Legal with TB Legal, as they have an interest in s28 of the FAA, and given that their Deputy and Associate Deputy expresses strong views on the need for the Minister of Finance to hold responsibility for the guarantee?

Gadi

From: Whitfield, Tobias P. (MOF)
Sent: Friday, April 21, 2017 5:23 PM
To: Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Malle Hanslep (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html-5Bleg.state.fl.us-5D&d=DwIF-g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=tFAAgRQTU0s9wAbu3-s9O6A8WaORM-zWr6qqj-3TfRk&s=GxEbjnHtLM-1g7mwTF12PJe_FGp5ys-wfJS6Hfssvqo&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html&d=DwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=Y_fkJeRoJZD-LzAJEPnXaFZu2UhWImljUPa5aePQXvI&s=1HUfd1nbfvUi59LhqOORa7t3LtNdTaqJrkvGEtCXtac&e=> .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)

Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

This message, including any attachments, is subject to solicitor-client privilege and may contain confidential information intended only for the individuals named above. Any distribution, copying or disclosure without permission is strictly prohibited.

From:	Anna Strathy
To:	Gadi Mayman; Malle Hanslep (MOF)
Cc:	Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject:	RE: Guarantee
Date:	Friday, April 21, 2017 3:05:34 PM

I can set that up. Meeting invite to follow with dial in details.

From: Gadi Mayman

Sent: Friday, April 21, 2017 2:59 PM

To: Malle Hanslep (MOF) ; Anna Strathy

Cc: Michael Waterston (MOF) ; Tobias P. Whitfield (MOF) ; Ken Kandeepan ; Ronald Kwan ; Mike Manning

Subject: Re: Guarantee

Sure, that timing works for me if someone can set up a call-in number.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:53 PM
To: Gadi Mayman; Anna Strathy
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject: RE: Guarantee

Thank you.
Given timelines on this project, can we have a quick call on this today, maybe at about 3:30. I would just like find out what staff know and think about the proposal generally. Carolyn said that they would like comments on the legislation by noon on Sunday and pens down is next Friday.
Malle

From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: April 21, 2017 2:38 PM
To: Hanslep, Malle (MOF); Strathy, Anna (OFA)
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF); Kandeepan, Ken (OFA); Kwan, Ronald (OFA); Manning, Mike (OFA)
Subject: Re: Guarantee

I think that some combination of Mike, Ron and Ken would make sense as the people at the OFA to speak with, so I've copied them on this response.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:35 PM
To: Gadi Mayman; Anna Strathy
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF)
Subject: RE: Guarantee

Just resending because I had the wrong email for Anna.

From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:33 PM
To: Mayman, Gadi (OFA); 'anna.strathy@ofina.ca'
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF)
Subject: FW: Guarantee

Hi Gadi, Anna,
We had a call with Carolyn Calwell and Paul Johnson at Energy Legal.
Please find attached a summary description of the guarantee for a number of obligations related to the proposed transaction that is being requested by OPG's investment dealers. There are 2 guarantees being requested: a guarantee of payment in certain situations as

well as a performance guarantee. Although the Province has provided payment guarantees in the past, I am not aware of the Province provided guarantees of performance so this would be a new type of guarantee. We understand that these guarantees would have to be authorized by the proposed legislation so the wording of the authorizing sections needs to be worked on. Right now the section is very general and doesn't yet include the word "guarantee". Also there should be some wording around the type or scope of the guarantee or what it is in relation to. As well, I am assuming that payment under the guarantee would have to be a charge on the CRF in order to provide sufficient support. I am not sure whether the Province's liability under these guarantees can be capped. Also I understand there is a section in the proposed legislation indicating s. 28 FAA does not apply so this is something for us to consider too.
I understand that Tory's (OPG's counsel) is working on a first draft of the guarantee, but it does not appear that the scope of the guarantee would be settled before legislation is introduced.
I don't' know if you have seen the attached document previously. Who would you like us to speak to at the OFA about this proposal?
Thanks.
Malle
Malle Hanslep
Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
Notice: This communication may be solicitor/client privileged and contain confidential information intended only for the person(s) to whom it is addressed. If you have received this message in error please notify the writer and permanently delete the message and all attachments. Thank you.

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 12:49 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle, can we give you a call around 1:30? In the meantime, I attach a summary prepared by the investment dealers (CIBC, Goldman) advising OPG of the types of guarantees that they are expecting to see as part of this proposal.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,
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guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.
A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.
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Happy to answer your questions or walk you through the proposed bill.
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Cc: Hanslep, Malle (MOF)
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Thanks!
Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Anna Strathy
To:	Gadi Mayman; Malle Hanslep (MOF)
Cc:	Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject:	RE: Guarantee
Date:	Friday, April 21, 2017 3:05:34 PM

I can set that up. Meeting invite to follow with dial in details.

From: Gadi Mayman

Sent: Friday, April 21, 2017 2:59 PM

To: Malle Hanslep (MOF) ; Anna Strathy

Cc: Michael Waterston (MOF) ; Tobias P. Whitfield (MOF) ; Ken Kandeepan ; Ronald Kwan ; Mike Manning

Subject: Re: Guarantee

Sure, that timing works for me if someone can set up a call-in number.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:53 PM
To: Gadi Mayman; Anna Strathy
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject: RE: Guarantee

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Sent: April 21, 2017 2:38 PM
To: Hanslep, Malle (MOF); Strathy, Anna (OFA)
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF); Kandeepan, Ken (OFA); Kwan, Ronald (OFA); Manning, Mike (OFA)
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Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
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Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
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Please find attached a summary description of the guarantee for a number of obligations related to the proposed transaction that is being requested by OPG's investment dealers. There are 2 guarantees being requested: a guarantee of payment in certain situations as well as a performance guarantee. Although the Province has provided payment guarantees in the past, I am not aware of the Province provided guarantees of performance so this would be a new type of guarantee. We understand that these guarantees would have to be authorized by the proposed legislation so the wording of the authorizing sections needs to be worked on. Right now the section is very general and doesn't yet include the word "guarantee". Also there should be some wording around the type or scope of the guarantee or what it is in relation to. As well, I am assuming that payment under the guarantee would have to be a charge on the CRF in order to provide sufficient support. I am not sure whether the Province's liability under these guarantees can be capped. Also I understand there is a section in the proposed legislation indicating s. 28 FAA does not apply so this is something for us to

consider too.
I understand that Tory's (OPG's counsel) is working on a first draft of the guarantee, but it does not appear that the scope of the guarantee would be settled before legislation is introduced.
I don't' know if you have seen the attached document previously. Who would you like us to speak to at the OFA about this proposal?
Thanks.
Malle
Malle Hanslep
Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
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From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 12:49 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle, can we give you a call around 1:30? In the meantime, I attach a summary prepared by the investment dealers (CIBC, Goldman) advising OPG of the types of guarantees that they are expecting to see as part of this proposal.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,
Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.
A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.
Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM

To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Hanslep, Malle (MOF)
To:	Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Michael Waterston (MOF)
Subject:	RE: Guarantee
Date:	Saturday, April 22, 2017 10:32:27 AM

Hi Gadi,
I was thinking about the approach further and I think it would be best if I write to Len Hatzis (legal director at TBS) and Carolyn (so she is aware) first to let Len know the background that the DM of TBS is in favour of the Minister of Finance signing any required guarantee (although maybe he is well aware of this already) and also MOF/OFA view that we shouldn't exempt generally transactions under the new proposed Act from s. 28.
Then Len can let me know which TBS counsel are working on it as I think that it may be Nick and Paul but don't know for sure and don't know what their involvement on this file has been and I don't think I should send the email to TBS without letting Carolyn know.
]Malle

From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: April-21-17 8:07 PM
To: Hanslep, Malle (MOF); Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Waterston, Michael (MOF)
Subject: Re: Guarantee
Thanks, Malle, if you wouldn't mind sharing it with Nick or Paul, that'd be great.
Gadi

From: Hanslep, Malle (MOF) <Malle.Hanslep@ontario.ca>
Sent: Friday, April 21, 2017 7:54:48 PM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Hi Gadi

I think that would be fine. I don't know who in particular at TBS legal might be looking at this although it might be Nick Smook and Paul Kaufman

Malle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Gadi Mayman
Sent: Friday, April 21, 2017 19:05
To: Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Subject: Re: Guarantee

Thanks. Just a question, would it make sense to share your response to Energy Legal with TB Legal, as they have an interest in s28 of the FAA, and given that their Deputy and Associate Deputy expresses strong views on the need for the Minister of Finance to hold responsibility for the guarantee?

Gadi

From: Whitfield, Tobias P. (MOF)
Sent: Friday, April 21, 2017 5:23 PM
To: Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Malle Hanslep (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html-5Bleg.state.fl.us-5D&d=DwIF-g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=tFAAgRQTU0s9wAbu3-s9O6A8WaORM-zWr6qqj-3TfRk&s=GxEbjnHtLM-1g7mwTF12PJe_FGp5ys-wfJS6Hfssvqo&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html&d=DwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=Y_fkJeRoJZD-LzAJEPnXaFZu2UhWImljUPa5aePQXvI&s=1HUfd1nbfvUi59LhqOORa7t3LtNdTaqJrkvGEtCXtac&e=> .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)

Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
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Michael Waterston
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Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Mike Manning
To:	"Thom, Trevor"
Cc:	Mike Manning
Subject:	RE: Hi
Date:	Wednesday, March 29, 2017 10:24:51 AM

Hi Trevor:
Scott Nelms – ADM Electricity Investment and Governance Secretariat. Ministry of Finance
Stephen Ashbourne – Partner Blake, Cassels & Graydon
Mike Manning – Executive Director, OFA
James Devine – Director Funding, OFA
Carlos Yep – Manager Funding, OFA

Mike

From: Thom, Trevor [mailto:Trevor.Thom@tdsecurities.com]
Sent: Wednesday, March 29, 2017 8:57 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: Hi

Hi Mike,

When you have a moment, can you email me the attendees from your side for today's meeting. Thx.

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com

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From: Nelms, Scott (MOF)
To: Mike Manning; ASHBOURNE, STEPHEN
Subject: RE: Key points / questions
Date: Monday, March 27, 2017 11:01:05 AM

Thanks Mike. Glad to hear. I was thinking my email below was sufficiently cleaned up to be copied and pasted to be sent out. Do you need anything more from me?

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 27, 2017 10:59 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Subject: RE: Key points / questions
Thanks guys, email looks good. I've talked to TD, Scotia & BMO and they are all ok to proceed. If I get scott's cleaned up email, then I can send it to the dealers. Hoping we are good to go. We can then arrange times for Wednesday.
Regards, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 10:51 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Key points / questions
Thanks Steve. This makes sense. I have made your changes below, and have cleaned up the email so that it is ready to be sent around to the banks.

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: March 27, 2017 10:02 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Subject: RE: Key points / questions
Thanks Scott. This looks good to me. A few small thoughts:

1. First point… "electricity-related charges" rather than "electricity rates"
2. First point … "… it charges through to ratepayers …" (i.e., billings are through LDCs)
3. Second point … "principal"
4. Sixth point … " to help develop and review"
5. New language "… consider modifications to this structure …"
6. Timing … "the spring
7. Q3 … "cross-border,"
8. Q4 … "experience with financing legislatively …"

On the questions, you might consider:

1. What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
2. Do you have experience with government accounting rules applicable to non-controlled legal entities?

Hope that's somewhat useful.
Regards, Steve
Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000, Toronto ON M5L 1A9
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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 9:40 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: FW: Key points / questions

As per our conversation, please see the edits in red below.

From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: Key points / questions

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principal, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- The Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- The Province is involved in developing legislation, regulation and other policies to enable this structure
    - the Province is seeking outside expertise to help develop and review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications to this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in the spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described

above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this engagement, and why?
6) What are the key considerations for investors in purchasing “AAA” debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

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Stephen R. Ashbourne
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7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

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From:	Mike Manning
To:	Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Subject:	RE: Key points / questions
Date:	Monday, March 27, 2017 10:58:33 AM

Thanks guys, email looks good. I've talked to TD, Scotia & BMO and they are all ok to proceed. If I get scott's cleaned up email, then I can send it to the dealers. Hoping we are good to go. We can then arrange times for Wednesday.

Regards, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 10:51 AM
To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Key points / questions

Thanks Steve. This makes sense. I have made your changes below, and have cleaned up the email so that it is ready to be sent around to the banks.

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Sent: March 27, 2017 10:02 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Subject: RE: Key points / questions

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Hope that's somewhat useful.

Regards, Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 9:40 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: FW: Key points / questions

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From: Nelms, Scott (MOF)
To: ASHBOURNE, STEPHEN; Mike Manning
Subject: RE: Key points / questions
Date: Monday, March 27, 2017 10:51:31 AM

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To: Nelms, Scott (MOF); Manning, Mike (OFA)
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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 9:40 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: FW: Key points / questions

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From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
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From: ASHBOURNE, STEPHEN
To: Scott Nelms (ENERGY); Mike Manning
Subject: RE: Key points / questions
Date: Monday, March 27, 2017 10:02:25 AM

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From:	Mike Manning
To:	Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Subject:	RE: Key points / questions
Date:	Monday, March 27, 2017 11:19:35 AM

Yes that's fine Scott.

Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 11:01 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>
Subject: RE: Key points / questions

Thanks Mike. Glad to hear. I was thinking my email below was sufficiently cleaned up to be copied and pasted to be sent out. Do you need anything more from me?

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 27, 2017 10:59 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Subject: RE: Key points / questions

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To: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: Key points / questions

Thanks Steve. This makes sense. I have made your changes below, and have cleaned up the email so that it is ready to be sent around to the banks.

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: March 27, 2017 10:02 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Subject: RE: Key points / questions

Thanks Scott. This looks good to me. A few small thoughts:

1. First point… "electricity-related charges" rather than "electricity rates"

2. First point … "… it charges through to ratepayers …" (i.e., billings are through LDCs)
3. Second point … "principal"
4. Sixth point … " to help develop and review"
5. New language "… consider modifications to this structure …"
6. Timing … "the spring
7. Q3 … "cross-border."
8. Q4 … "experience with financing legislatively …"

On the questions, you might consider:

1. What are the key considerations for investors in purchasing "AAA" debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
2. Do you have experience with government accounting rules applicable to non-controlled legal entities?

Hope that's somewhat useful.

Regards, Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

———————————

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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Monday, March 27, 2017 9:40 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: FW: Key points / questions

As per our conversation, please see the edits in red below.

From: Nelms, Scott (MOF)
Sent: March 27, 2017 8:33 AM
To: ASHBOURNE, STEPHEN; Manning, Mike (OFA)
Subject: Key points / questions

Good Morning,

In advance of our conversation, I thought I would pull together a few quick suggested points:

Background:

- Ontario electricity agencies, IESO and OPG, are supporting the Province's plan to reduce electricity related changes to ensure intergenerational fairness by establishing mechanisms to borrow as much as $2.5B per year for the next ten years. This borrowing would allow IESO to temporarily reduce the amounts it charges through to ratepayers (through what is called the Global Adjustment Mechansim) while continuing to pay electricity generators as per their contracts
- IESO plans to establish a regulatory asset (a right to collect from future ratepayers to cover all costs including principal, interest and administration, associated with Global Adjustment refinancing)
- OPG, through a special purpose vehicle, intends to purchase this asset from IESO on an ongoing basis, financed by 3rd party lenders
- The Province, OPG and IESO are currently working through mechanics of the arrangement
- OPG has engaged CIBC, RBC and Goldman to act as leads in developing the financing structure
- The Province is involved in developing legislation, regulation and other policies to enable this structure
    - the Province is seeking outside expertise to help develop and review the proposed structure and legislative requirements provided by OPG and its advisors
    - the Province is seeking support to ensure that the structure meets immediate objectives (e.g. financing at a reasonable cost), while also affording flexibility to review and consider modifications to this structure over time, as circumstances and objectives change
    - the advisor will have an opportunity to help guide the process, affording a deeper understanding of the asset and structure when participating in future syndications
- Timing: this commitment is expected to start immediately in order to support proceeding with legislation in the spring and continue through the fall of 2017
- Confidentiality: given the profile and sensitivity of this initiative, the Province anticipates signing a non-disclosure agreement with the successful candidate
- Based on this background and currently available public information, we would like to set up a conversation with you and your team to discuss the following questions in order to help us to select an advisor for this role:

Questions:

1) what are the key steps that you would take to establish the financing vehicle described above?
2) what are the key challenges associated with this sort of structure and how would you suggest mitigating these challenges?
3) what is your experience with securitizations, asset backed securities, and alternative financing mechanisms, including cross-border, particularly involving the public sector and utilities?
4) What is your experience with financing legislatively created assets?
5) who (or what team) would you suggest as advisors to the Province for this

engagement, and why?

6) What are the key considerations for investors in purchasing “AAA” debt issued from a structure backed by this sort of a variable asset? What features can address these considerations?
7) Do you have experience with government accounting rules applicable to non-controlled legal entities?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com[blackberry.com])

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From:	Christina Zhang
To:	Ken Kandeepan
Cc:	Mike Manning
Subject:	RE: Latest SCOPA Comms Products
Date:	Monday, October 03, 2016 5:52:10 PM
Attachments:	MOF QAs_Oct 3 2016 6pm.docx

Hi,
Yes, thanks very much for that. That's what I had meant to say!
Please find attached the Q&As which i've updated the borrowing numbers to September 30th.
Have a good evening.
Regards,
Christina

From: Ken Kandeepan
Sent: Monday, October 03, 2016 5:44 PM
To: Christina Zhang
Cc: Mike Manning
Subject: Re: Latest SCOPA Comms Products
Note that I have updated all numbers in Gadi's remarks including the borrowing to September 30th. Making the same update to the Q and A will be useful.
Thanks
Ken k

On Oct 3, 2016, at 5:23 PM, Christina Zhang <Christina.Zhang@ofina.on.ca> wrote:

> Hi there,
> FYI. DMO has confirmed that we're to keep SCOPA Q&As as is and that there's no need to update based on today's release of the unaudited consolidated financial statements.
> That said, I'll review and update the borrowing numbers as of September 30th. Because of the delay in SCOPA, all our borrowing numbers were as of August 31th.
> In the meantime, I'll planning to share the two documents with DMO as drafts. One is Gadi's remarks (which Ken kindly reviewed and updated) and the proposed friendlies by Bonnie.
> Once I've updated the Q&As, I'll send all three items to Gadi as well as a FYI. Just very reluctant to send him anything during his holiday.
> Thank you,
> Christina
>
> **From:** Ize-Dukuze, Marilyn (MOF) [mailto:Marilyn.Ize-Dukuze@ontario.ca]
> **Sent:** Monday, October 03, 2016 5:12 PM
> **To:** Tara McGrath (MOF) <Tara.McGrath@ontario.ca>; Birks, Ryan (MOF) <Ryan.Birks@ontario.ca>
> **Cc:** Christina Zhang <Christina.Zhang@ofina.on.ca>; Tomasz Bugajski <Tomasz.Bugajski@ofina.on.ca>; Ghufran Tarin (MOF) <Ghufran.Tarin@ontario.ca>
> **Subject:** RE: Latest SCOPA Comms Products
> Hi both –

SCOPA is still very much about the 2014-15 PA, thus current QAs do not need updating. However, additional QAs reflecting 2015-16 PA release are also now required. For this, we are asking TBS to share the QA package that was put together (with MOF input) for the 2015-16 PA release. This would be added to the SCOPA binders in addition to the QAs on 2014-15 PA.

Following up on strategy for remarks.

Thanks,

Marilyn Ize-Dukuze | ph. 416.326.8529 | bb. 416.302.3609

From: McGrath, Tara (MOF)

Sent: Monday, October 3, 2016 4:36 PM

To: Birks, Ryan (MOF); Ize-Dukuze, Marilyn (MOF)

Subject: RE: Latest SCOPA Comms Products

Hi,

I think we also need clarification as to whether materials are meant to be updated to reflect the release of the PAs or not. This would also include the DM's remarks. Thanks,

Tara

From: Birks, Ryan (MOF)
Sent: October-03-16 3:55 PM
To: Ize-Dukuze, Marilyn (MOF)
Cc: McGrath, Tara (MOF)
Subject: Latest SCOPA Comms Products

Hi Marilyn,

Would it be possible to send us the latest package of SCOPA Comms products? We'll have updates to our Qs&As based on the release of PA.

I just want to make sure we have enough time to turn around edits.

Thanks,

Ryan

Ryan Birks
Special Policy Advisor and Executive Assistant
ADMO, Office of the Budget
416-327-0074

Questions and Answers

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OFFICE OF THE BUDGET

Q. Will you still be able to balance if Ontario's economy does not perform as strongly as you forecast? Even the FAO has said that your forecast is optimistic.

A. The government is dedicated to a fiscally sound approach to managing the Province's finances, and remains committed to balancing the budget in 2017-18 and 2018-19.

The Ontario economy continues to grow in a challenging global environment. In fact, Ontario posted higher real GDP growth in the first quarter of 2016 than Canada, the U.S. and all other G7 countries.

While uncertainty in the global economy has increased, along with increased volatility in global financial and currency markets, Ontario has a diversified economy – meaning the Province is well positioned to respond to changing global economic conditions.

From a fiscal planning perspective, Ontario incorporates prudence in its projections.

- As required by the Fiscal Transparency and Accountability Act, 2004 (FTAA), the fiscal plan incorporates includes a reserve to protect the fiscal outlook against unforeseen adverse changes in the Province's revenue and expense, including those resulting from changes in Ontario's economic performance. The reserve has been set at $1.0 billion in 2016–17, $1.1 billion in 2017–18, and $1.2 billion in 2018–19.

- The fiscal plan also includes contingency funds to help mitigate expense risks that may otherwise negatively impact Ontario's fiscal performance.

With the economy expected to continue to growth, and the Province's ongoing commitment to transform government programs and services, Ontario is well positioned to achieve balance.

Q. From your perspective, why is it important that the government has consistently beaten its deficit targets, in terms of the province's finances?

A. The government remains committed to balancing the budget by 2017-18 and is taking deliberate and responsible steps to achieve this goal.

The government recognizes that a fiscally sound approach to managing the Province's finances will:

- Provide the foundation for the long-term well-being and prosperity of Ontarians; and

- Protect the public services that Ontarians rely on.

For 2015-16, Ontario is on track to beat its deficit target for the seventh year in a row. By continuing to beat its fiscal targets, Ontario's accumulated deficit is $30 billion lower than it otherwise would have been.

Beating our deficit targets helps to keep interest on debt at a manageable level and protects future generations from rising interest costs, which could otherwise crowd out spending on government priorities.

OFFICE OF ECONOMIC POLICY

Revenue Questions and Answers

2014-15 Actual Vs. 2015 Budget Interim

	2015 Budget Interim ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	82,654	82,275	-379	-0.5
Government of Canada Transfers	21,713	21,615	-98	-0.5
Income from Government Business Enterprise	5,311	5,615	304	5.7
Other Non-Tax Revenue	8,839	9,041	202	2.3
Total Revenue	**118,517**	**118,546**	**29**	**0.0**

Q. Can you explain the $29 million increase in revenue since your 2015 Budget?

A. The modest $29 million improvement in revenues is largely due to higher net income of Government Enterprises and revenues from Other Non-Tax Revenues mainly offset by lower Taxation Revenues and Federal Payments.

- Net income from Government Enterprises is $304 million higher mainly due to higher revenue from OPG (including favourable nuclear fund financial market performance) and OLG's higher numbers of large jackpots late in the fiscal year.
- Higher Other Non-Tax revenues of $202 million came from a variety of sources, including consolidated agencies and electricity sector.
- Taxation revenues are $379 million lower largely due to lower Corporations Tax revenue (-$591M) partially offset by higher Personal Income Tax revenue (+$285M).
- Lower Federal Payments (-$98M) is largely due to a decline in transfers to consolidated government agencies.

Q. **Why are Taxation revenues $379 million below your Interim estimate?**

A. Most of the weakness in Taxation revenues is due to lower Corporations Tax (-$591M) because 2014 corporate profits turned out to be lower than estimated at the time of the 2015 Budget. This is partially offset by higher Personal Income Tax revenue (+$285M) based on results from the processing of tax returns for 2014 and prior years.

2014-15 Actual Vs. 2014 Budget Plan

	2014 Budget Plan ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	83,365	82,275	-1,090	-1.3
Government of Canada Transfers	21,882	21,615	-267	-1.2
Income from Government Business Enterprise	5,026	5,615	589	11.7
Other Non-Tax Revenue	8,598	9,041	443	5.2
Total Revenue	**118,871**	**118,546**	**-325**	**-0.3**

Q. Why are revenues $325 million lower than your 2014 Budget projection?

A. Revenues were $325 million below the 2014 Budget Plan largely due to lower Taxation revenues and lower Federal Payments partially offset by higher net income from Government Business Enterprises (mainly OPG) and higher Other Non-Tax Revenues.

- Taxation revenues were $1,090 million lower and Federal Payments were $267 million weaker than projected.
- Partially offset came from higher net income from Government Business Enterprises (+$589M) and Other Non-Tax Revenues ($443M).

Q. What accounts for the $1,090 million decrease in Taxation revenues from your 2014 Budget projection?

A. Taxation revenues were $1,090 million lower due mostly to lower Corporations Tax (-$697M) and lower Sales Tax (-$248M).

- The $697 million decrease in Corporations Tax revenue is due mainly to lower 2014 profits, lower 2013 corporate income tax assessments and higher refunds to corporations for years prior to 2009.
- The $248 million decrease in Sales Tax Revenue is due largely to revisions to HST entitlement estimates for 2013 and prior years.

Q. **Why were Federal transfers $267 million lower than your 2014 Budget projection?**

A. Lower Federal transfers were largely due to revised timelines for Building Canada Fund projects and lower transfers to government agencies, including Agricorp and Toronto 2015. These lower transfers are largely offset by lower spending associated with these transfer programs.

Q: How did net income from Government Business Enterprises increase by $589 million from your 2014 Budget projection?

A: This was mostly attributable to Ontario Power Generation Inc., reflecting lower operating costs and better financial market performance of its nuclear funds.

Q: What accounts for the $1.1 billion decrease in taxation revenues from your 2014 Budget projection?

A: Taxation revenues were $1.1 billion lower due largely to lower corporations tax revenue (-$0.7 billion) and lower sales tax revenue (-$0.2 billion).

- Lower 2013 corporate income tax assessments resulted in a higher repayment to the Canada Revenue Agency for amounts already paid to the Province for the 2013 tax year and, refunds to corporations for tax years prior to 2009 were also higher.
- Sales tax revenue was lower due to revisions to harmonized sales tax entitlement estimates for 2013 and prior tax years.

2014-15 Actual Vs. 2013-14 Actual

	2013-14 Actual ($M)	2014-15 Actual ($M)	Variance ($M)	Variance (%)
Taxation Revenue	79,966	82,275	2,309	2.9
Government of Canada Transfers	22,276	21,615	-661	-3.0
Income from Government Business Enterprise	5,337	5,615	278	5.2
Other Non-Tax Revenue	8,331	9,041	710	8.5
Total Revenue	**115,911**	**118,546**	**2,635**	**2.3**

Q: How did revenues perform in 2014-15 compared to 2013-14?

A: In 2014-15, revenues increased by $2.6 billion or, or 2.3 per cent, from 2013-14.

- Taxation revenue increased by $2.3 billion over the previous year. The increase was across most taxation revenue sources, partially offset by a $1.9 billion decrease in Corporations Tax reflecting adjustments in respect of prior years.
- The combined net incomes of Government Business Enterprises were up $0.3 billion from the previous year.
- Federal Payments declined by $0.7 billion mainly because of a reduction in Equalization Payments, partially offset by increased health and social transfers
- Other Non-Tax revenue increased by $0.7 billion largely due to the gain of the sale of the Province's remaining General Motors shares during 2014-15.

Q: **Why is year-over-year growth in Taxation revenue 2.9 per cent when nominal GDP growth was 3.6 per cent?**

A: Growth in Taxation revenue of 2.9 per cent is lower than 2014 nominal GDP growth of 3.6 per cent largely due to a $1.9 billion decrease in Corporations Tax reflecting prior year adjustments. This included:

- a repayment of -$1.3B, due to a Federal government overpayment of 2013 corporate income tax during 2013, and
- a projected repayment to the Federal government of $0.5B for an overpayment to the Province for the 2014 tax year.

Q: **What explains the fairly strong year-over-year growth in Personal Income tax revenues of 8.9 per cent?**

A: The higher Personal Income Tax revenues growth reflects growth in personal incomes as well as the impact of the high-income measure introduced in the 2014 Budget and the net impacts of one-time prior-year adjustments in both 2013-14 and 2014-15.

Q: **Given the recent poor results for Quebec and California allowances auctions, is the Government still expecting to meet revenue targets set out in the 2016 Budget?**

A: The poor auction results suggest a risk to cap and trade revenues. However, it is too early to determine what actual impact on revenues will be.

In three joint WCI auctions held so far in 2016, allowances have gone unsold.

- In February, 94% of the allowances offered by Quebec were sold; California sold 95% of the total allowances it offered.
- In May, both Quebec and California sold about 11% of the total allowances they each offered.
- The August auction performed relatively better though still undersubscribed, selling 35% of offered allowances.

It is possible, however, that emitters are holding off on buying allowances until they get closer to the end of the compliance period (current compliance period from 2015 through 2017).

The uncertainty related to legal challenges to California`s cap and trade program may have contributed to the poor sale of allowances at the May and August auction. In joint auctions prior to 2016, all the allowances that were offered for sales were sold.

Ontario is planning to hold stand-alone auctions starting in March 2017 before linking with California and Quebec in 2018. Initial stand-alone auctions could result in a higher-than-WCI domestic carbon price.

The medium-term revenue outlook includes projected cap-and-trade proceeds from the auctioning of carbon allowanced beginning in 2017. The current estimate for proceeds is:

- $478 million in 2016-17; and
- Between $1.8 billion and $1.9 billion annually starting in 2017-18.

Revenue Forecasting Unit, Economic and Revenue Forecasting and Analysis Branch, OEP

Contact: Bruno Amara (325-0766)

ONTARIO FINANCING AUTHORITY

Friendly Questions

Debt Burden

Q. Our government has a target for reducing the net-debt-to-GDP ratio. Can you tell us more about the target and how our government is doing in terms of reaching that target?

A. Net debt, as of March 31, 2016, is forecast to be $296.1 billion, $2.8 billion lower than forecasted in the *2015 Budget*. Net debt was $284.6 billion as of March 31, 2015. The net debt-to-GDP ratio is forecast to peak at 39.6 per cent in 2015-16, remain level in 2016-17, and decline to 38.9 per cent in 2017-18 and 38.5 per cent in 2018-19.

Ontario conducts a robust and responsible borrowing program that protects the public interest. The government successfully completed its annual borrowing program in 2015-16, borrowing $32.1 billion. Long-term borrowing for 2016-17 is forecast to be $24.4 billion when factoring in $2.0 billion pre-borrowed in 2015-16. This will be the Province's smallest borrowing program since 2007-08.

As of August 31, 2016, the Province had borrowed $12.5 billion for the fiscal year. Approximately 71per cent of this year's borrowing-to-date has been completed in Canadian dollars. The remainder of the Province's borrowing-to-date has been completed in international currencies primarily through U.S. dollar global bonds, and two small Australian dollar Kangaroo bond issues.

Through prudent and cost-effective debt management, the Province has consistently kept interest on debt costs below budget projections. The *2010 Budget* forecast that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 2.7 cents lower, at 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 1990s and 2000s, and is forecast to remain lower through the outlook period in 2018-19.

Term extension has allowed the Province to lock in low interest rates for a longer period, which reduces refinancing risks and helps offset the impact of expected higher interest rates on the Province's interest on debt costs.

Going back to the beginning of fiscal 2010-11, Ontario has issued $59.1 billion of bonds longer than 30 years to lock in low rates. As a result, the weighted-average term to maturity of long-term provincial debt issued has been extended significantly, from 8.6 years in 2008-09 to 15.6 years as of August 31.

~~**Q. Noting that a key indicator of the government's ability to carry its debt entails examining the level of debt relative to the size of the economy, can you please explain further what the forecasted net debt-to-GDP ratio is for Ontario?**~~

~~**What effect does this have on the government's commitment to balancing the budget by 2017-18?**~~

~~A. The Province's net debt-to-GDP ratio is expected to peak in 2015-16 at 39.6 per cent, remain unchanged in 2016-17 and begin to decline in 2017-18.~~

~~The government continues to maintain a target of reducing the net debt-to-GDP ratio to its pre-recession level. Net Debt increases primarily for two reasons: to finance deficits and invest in capital assets. In the first few years after the global recession in 2008-09, the increase in net debt was primarily due to the deficit. However, the government is on track to eliminate the deficit and balance the budget by 2017-18. Once a balanced budget is achieved, the increase in net debt will be limited to the net investment in tangible capital assets.~~

Q: Moody's just released a report noting that Ontario's debt burden and debt service costs will remain manageable thanks to low interest rates, as well as the province's improving fiscal position and conservative debt management policy. Can you explain how your conservative debt management policies are keeping debt service costs manageable?

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A: Investor demand has allowed the Province to extend the term of its debt in recent years and lock in low interest rates for a longer period. This term extension reduces the Province's refinancing risks and helps offset the impact of expected higher interest rates on its IOD costs.

The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 23 per cent lower, at only 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Q: Moody's just released a report noting that Ontario's policy decision to borrow for infrastructure spending at a time of historically low interest rates, combined with the prudent debt management practices has helped to support the province's Aa2 rating. Can you explain how borrowing for infrastructure helps support the province's credit rating?

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A: We are making the biggest investment in public infrastructure in Ontario's history. We have a plan to invest more than $137 billion over the next 10 years, or about $160 billion over 12 years, starting in 2014–15. This is a strategic investment will grow the economy and create jobs.

Our plan is to first balance the budget while continuing to make strategic investments in capital assets. These infrastructure investments will stimulate economic growth, resulting in GDP growing more quickly than debt, and thereby lowering the net debt-to-GDP ratio.

With capital investments, the net debt-to-GDP ratio will come down more quickly than it would have without these investments in capital assets.

Capital investments are amortized over the useful life of the assets. Once a balanced budget is achieved, the increase in debt will be limited to the difference between the cash investment to build assets, and the amortization, which is a non-cash amount.

This historic investment in public infrastructure is critical to Ontario – today and tomorrow. From an economic perspective – these infrastructure investments will certainly pay off. Our investments will support an average of 110,000 jobs per year in Ontario, as well as creating significant GDP growth.

Interest Rates

Q. Chapter 2 of the Auditor General's 2014 annual report speaks to the increased vulnerability of Ontario with respect to interest rates. She points to the possible rise in rates related to borrowing.

However, I am also aware that the Province has consistently kept interest on debt costs below budget projections.

What steps has the government taken to reduce borrowing and keep interest on debt costs low?

A. Through prudent and cost-effective debt management, the Province has consistently kept interest on debt costs below budget projections. The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents on interest for every revenue dollar received. The current forecast is 23 per cent lower, at 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Extending the term of the debt that the Province issues has locked in low interest rates for a longer period, which reduces refinancing risks and helps offset the impact of expected higher interest rates on the Province's interest on debt costs.

Going back to the beginning of fiscal 2010–11, Ontario has issued $59.1 billion of bonds that do not mature for at least 30 years to lock in low rates. As a result, the

weighted-average term to maturity of long-term provincial debt issued has been extended significantly, from 8.6 years in 2008-09 to 15.~~3~~6 years as of ~~August 31.~~September 30.

Financial Instruments Standard

Q. I understand that proposed new standards by the Public Sector Accounting Board on Financial Instruments would affect interest on debt. Would it also affect other financial indicators of the provincial government?

A. The use of financial indicators helps the public and other readers of the Annual Report assess the financial health of the Province. Through the indicators' levels and trends, readers are able to gauge the impacts of economic and other events on the Province's finances, as well as how the government is responding to these.

The Public Sector Accounting Board's (PSAB) new standard on Financial Instruments, if implemented in its current form, would have a significant impact on how the Province uses derivatives to convert its current exposure in foreign currency debt into Canadian-dollar obligations. The proposed standard, which does not allow for hedge accounting, would introduce significant and difficult-to-forecast volatility in the accounting treatment of the Province's IOD, net debt and deficit. This is contrary to the current PSAB standard, comparable international and U.S. accounting standards, and Canadian private-sector accounting standards, all of which allow for hedge accounting.

Update to 2016 Budget, as of July 31, 2016

- The Province used derivatives to hedge approximately 98 per cent of its $61 billion in foreign currency debt into Canadian dollars.
- While $43 billion of this hedging would remain unaffected under the new standards, IOD and the deficit would become subject to significant swings entirely due to the type of derivative used on the remaining $18 billion.
- The derivative instruments used to hedge this $18 billion currently provide savings of up to 35 basis points, or over $60 million annually, relative to the cost of instruments that would otherwise have to be used under the new standard to eliminate volatility.
- From April 1st, 2016 to July 30th, 2016, the Canadian dollar depreciated by 0.7 cents against the U.S. dollar. Under the new standard, this would have resulted in a $1.3 billion accounting impact to the Province's IOD and deficit.

Ontario, supported by the borrowing communities of the majority of the provinces, has communicated its outstanding concerns with the standard to PSAB. It has requested that PSAB consider hedge accounting as an option, in line with comparable international, U.S. and Canadian private-sector accounting

standards. This approach would eliminate the potential accounting swings in IOD, the deficit and net debt. This would allow Ontario to continue to use the most economically efficient means of hedging its foreign exchange exposure and also ensure that the Province's financial results reflect the economic substance underlying its use of derivative instruments.

Borrowing and Debt Management – General

Q. Why was total long-term public borrowing $32.1 billion in 2015–16 when the deficit was $5.7 billion?

A. In addition to financing the deficit, long-term public borrowing refinances debt maturities and debt redemptions, funds the Province's investments in capital assets, and loans to agencies. The Province also pre-borrowed $2.0 billion of its 2016-17 requirements.

~~**Q. Why did the Net Debt-to-GDP ratio decline to 39.6 per cent at the end of fiscal 2015–16, compared to the 39.8 per cent forecast in the 2015 Budget?**~~

~~A. The reduction in the Net Debt-to-GDP ratio was primarily due to lower than forecast deficits and investment in capital assets in 2015–16.~~

Q. The Province is projected to borrow $24.4 billion in 2016–17. That's approximately $1,753 for every person in Ontario. When will the Province eventually run into a debt wall like Greece, Portugal and Ireland and be forced to raise taxes and cut services?

A. There is strong demand for Ontario bonds in both the domestic and international markets. Last fiscal year Ontario was able to borrow $32.1 billion in long-term debt while our spread, or the margin that we have to pay over the equivalent Government of Canada bond, tightened, indicating ongoing strong demand for Ontario bonds.

We expect that the liquidity of Ontario benchmark bonds and continuing confidence in the value of Ontario debt will allow us to cost-effectively complete the 2016–17 borrowing program. As of ~~August 31~~September 30, 2016, $13.3~~2.5~~ billion or 5~~4~~1 per cent, of this year's long-term borrowing requirement has been completed.

Q. Has it been difficult to complete the Province's borrowing program?

A. The Province continues to have steady access to both domestic and international bond markets. As of ~~August 31~~September 30, 2016, the Province had borrowed $13.3~~2.5~~ billion for the fiscal year. Approximately 69~~71~~ per cent of this year's borrowing-to-date has been completed in Canadian dollars. The remainder of the Province's borrowing-to-date has been completed in international currencies primarily through U.S. dollar global bonds, and two small Australian dollar

Kangaroo bond issues. In 2015–16, the Province borrowed $32.1 billion, with $2.0 billion in pre-borrowing.

Q. What is the difference between total debt, net debt and accumulated deficit?

A. Total debt represents all borrowing.

Net debt is all borrowing plus other liabilities, minus the Province's financial assets.

By analogy, think of a family's finances. A mortgage, car loans and lines of credit represent total debt. Total debt partially offset by money the family has in the bank, in RRSPs and in RESPs represents the family's net debt.

Accumulated deficit is the sum of all past Provincial surpluses and deficits, adjusted for changes in accounting rules.

Q. Is the Province planning to issue any more Green Bonds in the future?

A. On January 22, 2016, the Province of Ontario successfully priced its second Global Canadian Dollar (CAD) Green Bond for $750 million. There was strong demand for Ontario's second Green Bond issue, with 52 investors participating in the trade. Eight projects were selected as eligible and are expected to receive funding from the second Green Bond, with an emphasis on clean transportation and energy efficiency and conservation.

To date, total Green Bond financing amounts to $1.25 billion, with up to $1.2 billion allocated to Metrolinx for clean transportation projects.

As the first Canadian province to issue Green Bonds, Ontario continues to lead the way in establishing and developing a Canadian dollar Green Bond market with investor participation from around the world.

Q. What are unrestricted liquid reserves, and how do they ensure that Ontario will have sufficient liquidity to meet its financial obligations?

A. The Province maintains liquid reserves in the form of cash and temporary investments, which can immediately be converted to cash.

In the normal course of doing business, the Province enters into transactions that may require it or its counterparties to pledge short term investments. Although the pledged investments are technically owned by the Province, they are deducted from the total liquid reserves figure to arrive at unrestricted liquid reserves. This provides a more conservative measure of the liquidity available to meet the Province's financial obligations.

The Province ensures it always has a prudent level of unrestricted liquid reserves to cover all obligations in the short term.

Interest on Debt (IOD)

Q. What is the impact on IOD of a $1.0 billion change in the deficit?

A. The 2016-17 impact is forecast to be approximately $30 million.

Q. What is the impact on IOD of a one percentage point change in interest rates?

A. The 2016-17 impact is approximately $350 million.

Q. What is your assumed interest rate for the IOD forecast in the 2016 Budget?

A. The assumed ten-year interest rates are 3.1 per cent for 2016-17 and 3.8 per cent for 2017-18, based on the forecast for Government of Canada bonds that OEP collects from the private sector, plus a spread for the Ontario credit. For 2018-19, the forecast is 4.8 per cent and is based on the average Ontario interest rates over the past 15 years. This is the same methodology that we have used for the last number of years in putting together our IOD forecast. These rates are cautious and prudent, above current market rates.

Q. Will IOD costs crowd out other expenditures as interest rates rise and debt continues to climb? How can you address this problem?

A. Ontario has a realistic plan to balance its budget while investments are made in the priorities of Ontario families – health care, education, the environment and infrastructure.

Investor demand has allowed the Province to extend the term of its debt in recent years and lock in low interest rates for a longer period. This term extension reduces the Province's refinancing risks and helps offset the impact of expected higher interest rates on its IOD costs. The 2010 Budget forecasted that, by 2016-17, the Province would have to spend 11.7 cents of every revenue dollar received on interest. The current forecast is 23 per cent lower, at only 9.0 cents of interest costs for every dollar of revenue. This ratio is lower than it was in the 14 fiscal years from 1992–93 to 2005–06, and is forecast to remain lower through the period to balance in 2017–18.

Q. We understand that the proposed new standards by the Public Sector Accounting Board on Financial Instruments would affect IOD. Would it also affect other financial indicators of the provincial government?

A. Yes, Annual Deficit, Net Debt, Accumulated Deficit and their ratios as a percent to GDP would also be affected.

Q. If the proposed accounting change indicates savings, will the government be able to spend them?

A. The proposed accounting change introduces fair value measurement and prohibits hedge accounting. If implemented as planned, the Province's reported financial results would not accurately take into account the value of its derivatives. As a result, substantial accounting gains or losses could occur. These changes in value would be accounting changes only and not real changes in cash. This gain would only have been reflected in the Province's accounting statements, with no actual change in the cash available for program spending.

Credit Ratings

Q. What are the Province's current credit ratings?

A. The Province is rated:

	Long Term	Short Term
Moody's Investors Service:	Aa2	P-1
Standard & Poor's:	A+	A-1+
DBRS:	AA (low)	R-1 (mid)
Fitch	AA-	F1+

Q. What impact did Moody's removal of the negative outlook have on your borrowing costs?

A. Credit ratings are one of a number of factors that contribute to borrowing costs. Since the 2016 Ontario Budget was released, Ontario's credit spreads have narrowed modestly. This in part reflects the fact that all four credit rating agencies have affirmed Ontario's ratings reflecting their confidence in our plan to eliminate the deficit, with Moody's improving their outlook for Ontario's credit rating.

ONTARIO ELECTRICITY FINANCIAL CORPORATION

Friendly Question

Electricity Sector Stranded Debt

Q: The stranded debt arose under the *Energy Competition Act of 1998*, and its schedule, the *Electricity Act, 1998*. The *Electricity Act, 1998*, also enabled the implementation of the Debt Retirement Charge (DRC) on electricity ratepayers.

Since May 2002, residential and other electricity users have been paying the DRC of 0.7 cents per kilowatt hour (kWh) on their electricity bills. The DRC is paid to the Ontario Electricity Financial Corporation (OEFC) to help service and pay down the stranded debt that arose because of the restructuring of Ontario's electricity sector under the *Energy Competition Act, 1998*.

However, I know that the government eliminated the DRC from residential bills as of January 1, 2016.

This legacy charge from the Harris government was eliminated from residential bills about 2 years earlier than previously estimated – saving the average residential user about $70/year.

Can you please inform the committee of the commitment that the government has to eliminating the debt retirement charge cost for commercial, industrial and all other electricity users by 2018?

A. Thank you for the question.

As part of its commitment to reduce electricity cost pressures, the government has removed the Debt Retirement Charge (DRC) from residential electricity users' bills as of January 1, 2016.

This would save a typical residential user about $70 each year and meant ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*, as originally enacted. As a further step to mitigate electricity cost pressures for commercial, industrial and all other users, the government introduced legislation, passed on December 10, 2015, the *Budget Measures Act, 2015* to end the DRC on April 1, 2018, nine months earlier than previously estimated.

- A large industrial using 3,000 megawatt-hours (MWh) per month could save $21,000 per month, or about seven per cent off its electricity bills;

- For a large northern industrial in the Northern Industrial Electricity Rate program, this could be more than an eight per cent savings; and

- A small business using 20,000 kilowatt-hours (kWh) per month could save $140 per month, or about four per cent.

Ending the DRC on a legislated fixed date provides certainty to commercial, industrial and other users, and helps them more effectively plan their investment decisions.

I would note the following context. The government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. Based on interim numbers in *Budget 2016*, this is projected to be the twelfth consecutive year that the stranded debt has been reduced, to under $5 billion as at March 31, 2016, from $20.6 billion as at March 31, 2004. This allowed the government to follow through on its commitment to reduce electricity cost pressures.

Stranded Debt and Residual Stranded Debt Qs&As

Q. What is the impact of broadening ownership of H1 on Stranded Debt?

A. The interim 2015–16 results reflect the upfront benefits to OEFC of broadening the ownership of Hydro One through an initial public offering (IPO). This includes the OEFC receiving in fiscal 2015-16 – that is after March 31, 2015 -- $2.6 billion in departure tax and about $200 million in one-time additional payments in lieu of taxes (PILs), as Hydro One exited the PILs regime and will no longer pay corporate tax PILs to the OEFC.

The upfront impact on OEFC of the departure tax and one-time PILs payments on the OEFC's unfunded liability was partly offset by lower Electricity Sector Dedicated Income. In addition, the one-time departure tax reflects that Hydro One is now a taxable corporation, so it will no longer pay payments-in-lieu of corporate taxes (PILs) to OEFC, which reduces the estimated present value of future dedicated revenues to OEFC.

The government recognizes its commitment to electricity ratepayers under section 50.3 of the *Electricity Act, 1998*, and has taken steps to clarify and ensure that the benefits of selling shares in Hydro One are recognized by OEFC to contribute to the continuing reduction of its unfunded liability.

As part of the government's commitment to using the proceeds from broadening Hydro One ownership for infrastructure investments and paying down debt, proceeds related to the book value of the shares sold and the pre-IPO special dividend payment of $800 million paid by Hydro One to the Province will be used to pay down the Province's electricity sector debt and other payables.

This will allow the OEFC to reduce its overall debt, and contribute towards the Province's targeted $5 billion debt paydown. This debt paydown does not affect OEFC's stranded debt, as OEFC's receivables from the Province will be reduced by an equivalent amount.

[Note, Provincial payables to OEFC are notes payable to OEFC from the Province's acquisition of the equity in Hydro One in 1999, and in respect of cumulative net income since 1999.

Note this portion of the proceeds would have no net impact on OEFC's unfunded liability, as the cash asset would be offset by the reduction in the OEFC's receivable from the Province.]

Additional details

Under a Hydro One disposition, two future dedicated streams are affected:

1. Lower Hydro One earnings: The Province has committed to direct the income it earns from Hydro One (and OPG) in excess of the interest cost of its investment in the company. Upon a divestment, the Province would only be able to dedicate the portion of the net income that reflects its ownership stake. For example, in the case of a 15 per cent divestment, only 85 per cent of Hydro One's earnings less the associated interest cost, would be dedicated to OEFC. Currently, the Province owns about 70 per cent of Hydro One.

   Loss of federal portion of Payments in Lieu of Taxes: Prior to the IPO, Hydro One was exempted from regular federal and Ontario income tax and instead made payments in lieu of taxes to OEFC which helped service and paid down the stranded debt of the electricity sector. Payments in lieu of taxes to OEFC were equal to the federal and Ontario income tax Hydro One would pay if it were a taxable corporation. Following the beginning of broadening of ownership in Hydro One in November 2015, the Province's ownership of Hydro One fell below 90 per cent and the company ceased to be exempt from federal and Ontario income taxes and started to pay actual federal and provincial corporate income tax (CIT). As a result, OEFC would no longer receive the PILs from Hydro One equivalent to federal CIT. Under the amendments made to the *Electricity Act, 1998* in the *Budget Measures Act, 2015*, the Minister of Finance will pay the OEFC an amount equal to tax payable under the *Taxation Act, 2007* (i.e., the provincial CIT) by Hydro One Inc. (HOI), to continue to help service and pay down the electricity sector stranded debt. HOI is composed of Hydro One Ltd.'s regulated Ontario distribution, transmission and remotes businesses.

Q. What is the status of the old Ontario Hydro's stranded debt?

A. The government dedicates the revenues it receives from the electricity sector to the Ontario Electricity Financial Corporation (OEFC). All OEFC revenues, including the Debt Retirement Charge (DRC) paid by electricity consumers, are used to service and retire its debt and other obligations, as provided for under the *Electricity Act, 1998*.

For the twelfth consecutive year, the stranded debt is projected to be reduced, based on the interim 2015–16 results for the OEFC showing a projected excess of revenue over expense of more than $3 billion. The OEFC has paid down stranded debt by an estimated total of more than $15 billion from its peak in 2003-04, reducing stranded debt to under $5 billion as at March 31, 2016, based on interim numbers.

- The following table shows the unfunded liability (or "stranded debt") of OEFC since the opening amount of $19,433 million on April 1, 1999.

At March 31 ($M unless noted)	April 1, 1999	2000	2001	2002	2003	2004	2005	2006	2007
Unfunded Liability	$19,433	$20,034	$20,016	$20,085	$20,183	$20,550	$20,363	$19,293	$18,289
Increase / (Decrease)		$601	($18)	$69	$98	$367	($187)	($1,070)	($1,004)
At March 31 ($M unless noted)	2008	2009	2010	2011	2012	2013	2014	2015	Interim 2015-16
Unfunded Liability	$17,225	$16,182	$14,810	$13,448	$12,321	$11,257	$9,781	$8,185	<$5Bn
Increase / (Decrease)	($1,064)	($1,043)	($1,372)	($1,362)	($1,127)	($1,064)	($1,476)	($1,596)	>$3Bn

Residual Stranded Debt

Q. What is the residual stranded debt as at March 31, 2016?

A. The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* (Bill 144) and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt", were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. What is the current status of the residual stranded debt or what was the residual stranded debt the last time it was determined or estimated?

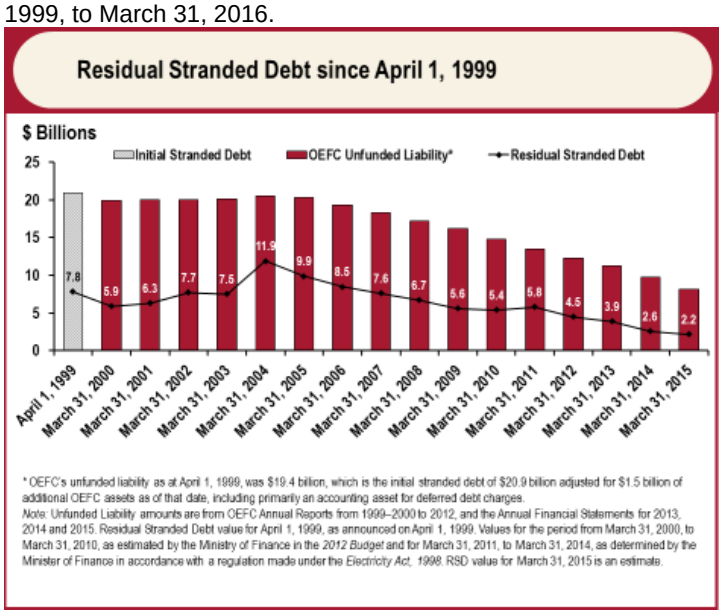
A. Prior to amendments in the *Budget Measures Act, 2015* under the *Electricity Act, 1998* the residual stranded debt was defined as the stranded debt minus the present value of projected future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC.

In the *2015 Ontario Economic Outlook and Fiscal Review*, the residual stranded debt was estimated to be $2.2 billion as at March 31, 2015. This was a decrease of $0.4 billion compared to residual stranded debt of $2.6 billion as at March 31, 2014, and was a total estimated decrease of $9.7 billion from an estimated peak of residual stranded debt of $11.9 billion as at March 31, 2004. Residual stranded debt was initially estimated as $7.8 billion as at April 1, 1999.

Residual stranded debt is estimated to have increased to a peak of $11.9 billion as at March 31, 2004, primarily due to the electricity price freeze, the downward revision in 2004 of the previous overestimation of future financial performance of Ontario Power Generation (OPG) which lowered the estimated future dedicated revenues to OEFC from the sector, and lower tax rates, resulting in lower projected future PILs to OEFC. OPG had significantly underperformed compared to its plans over the previous period of 1999 to 2004.

The estimated residual stranded debt amount and timing for its retirement were subject to uncertainty in forecasting future OEFC results and dedicated revenues to OEFC, which depend on the financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, and other factors such as interest rates and electricity consumption. The changes to the levels of unfunded liability to-date, based in part on the upfront impact on OEFC of the departure tax and one-time PILs payments, also reflect the fact that OEFC will have reduced dedicated revenues as a result of reduced ownership in Hydro One going forward.

The following chart illustrates the path of residual stranded debt from April 1, 1999, to March 31, 2016.



Q. When will the residual stranded debt be retired and the DRC end?

A. The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* (Bill 144) and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt" were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.As originally enacted, the *Electricity Act, 1998*, previously allowed for the Debt Retirement Charge (DRC) to be paid by consumers until the Minister of Finance determines that the residual stranded debt is retired.

The residual stranded debt determination was not a one-time determination. It was based on actual financial performance to-date and forecasting future OEFC results and future dedicated revenues to OEFC, which was subject to uncertainty and depended on the future financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, as well as other factors such as interest rates and electricity consumption.

As part of its commitment to reduce electricity cost pressures, the government has removed the DRC from residential electricity users' bills as of January 1, 2016.

This would save a typical residential user about $70 each year and would mean ending the DRC earlier for these users than otherwise provided for in the *Electricity Act, 1998*.

As a further step to mitigate electricity cost pressures for non-residential users, the government introduced legislation the *Budget Measures Act, 2015*, passed in December 2015, to end the DRC for all other users on April 1, 2018, nine months earlier than previously estimated.

Ending the DRC on a legislated fixed date provides certainty to commercial, industrial and other users, and helps them more effectively plan their investment decisions.

Even after the end of the DRC, there would still be stranded debt remaining, to be serviced and paid down by OEFC's other dedicated revenues, such as payments in lieu of taxes and the Gross Revenue Charge.

Q. Why did the residual stranded debt only fall from $2.6 billion to $2.2 billion between March 31, 2014, and March 31, 2015, if the Ontario Electricity Financial Corporation's (OEFC) unfunded liability fell by about $1.6 billion and the DRC collected the same year was $0.956 billion?

A. Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998* and the revocation of Ontario Regulation 89/12, the residual stranded debt was defined under the *Electricity Act, 1998* as the stranded debt minus the estimated present value of future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC. The Debt Retirement Charge would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

The residual stranded debt fell by less than the decrease in OEFC's unfunded liability due to a reduction in the estimated present value of future dedicated revenues to OEFC from $7.2 billion as at March 31, 2014, to $6.0 billion as at March 31, 2015, which reflected the uncertainty of and update to the forecast of future dedicated revenues to OEFC. These forecasted revenues depend on the financial performance of Ontario Power Generation, Hydro One and municipal electricity utilities, regulatory decisions by the Ontario Energy Board, as well as other factors such as interest rates and electricity consumption.

The residual stranded debt was not a fixed, one-time determination. Under the *Electricity Act, 1998*, and Ontario Regulation 89/12, the estimated amount of residual stranded debt depended on actual OEFC results to-date and a forecast of future revenues to OEFC.

Q. Why has the residual stranded debt only declined by $5.6 billion since April 1, 1999, to March 31, 2015?

A. The residual stranded debt increased from $7.8 billion as at April 1, 1999, to an estimated $11.9 billion as at March 31, 2004, as a result of an increase in stranded debt primarily due to the electricity price freeze, as well as a reduction in the estimated present value of future dedicated revenues to the Ontario Electricity Financial Corporation (OEFC), mainly reflecting the downward revision in 2004 of the previous overestimation of future financial performance of Ontario Power Generation (OPG), and lower tax rates. OPG had significantly underperformed compared to its plans over the previous period of 1999 to 2004.

Since 2004, the government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. The residual stranded debt has been reduced by an estimated $9.3 billion, from an estimated peak of $11.9 billion as at March 31, 2004, to $2.2 billion as at March 31, 2015.

Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998* and the revocation of Ontario Regulation 89/12, the residual stranded debt was defined under the *Electricity Act, 1998* as the stranded debt minus the estimated present value of future payments in-lieu of taxes (PILs), Gross Revenue Charge (GRC) and electricity sector dedicated income to be paid to OEFC. The Debt Retirement Charge would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt" were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. Since you have collected more than $12.5 billion in Debt Retirement Charge (DRC) revenue to March 31, 2015, why hasn't stranded debt declined by more?

A. Since 2004, the government's electricity sector reforms in the *Electricity Restructuring Act, 2004*, and others, have put the stranded debt recovery plan back on track. The Ontario Electricity Financial Corporation (OEFC) has paid down stranded debt by an estimated total of about $12.3 billion from its peak in 2003-04, reducing stranded debt to $8.2 billion as at March 31, 2015.

- As confirmed in the Auditor General's 2011 Annual Report, the DRC is used exclusively by OEFC to meet its mandate, as provided for under the *Electricity Act, 1998*, which includes servicing and retiring its debt and other liabilities.

- Servicing costs to the OEFC include interest expense, which is currently about $1.4 billion per year and has totalled about $30.5 billion between April 1, 1999 and March 31, 2015.

- Stranded debt increased by over $1 billion between April 1, 1999, and March 31, 2004, primarily as a result of the 4.3 ¢/kilowatt-hour (kWh) price freeze, which cost OEFC about $900 million.

- The Auditor General audits OEFC's annual financial statements and has provided an unqualified opinion every year since the initial 1999–2000 financial statements.

Q. After the removal of the DRC what is the government's plan to pay into the OEFC, to make up for that money? With the lower revenue going into the OEFC, isn't there a danger of it becoming insolvent?

A. The government has removed the Debt Retirement Charge (DRC) from residential users' electricity bills as of January 1, 2016. As a further step to mitigate electricity cost pressures for commercial, industrial and all other users, the government introduced legislation, passed on December 10, 2015, the *Budget Measures Act, 2015* to end the DRC on April 1, 2018, nine months earlier than previously estimated.

Prior to the *Budget Measures Act, 2015* amendments of the *Electricity Act, 1998*, the DRC would have been charged to consumers until the Minister of Finance determined that the residual stranded debt had been retired.

Even after the end of the DRC, there would still be stranded debt remaining, to be serviced and paid down by OEFC's other dedicated revenues, such as payments in lieu of taxes and the Gross Revenue Charge. The government expects that the stranded debt will continue to decline following the end of the DRC.

Background

Q. What is OEFC?

A. The Ontario Electricity Financial Corporation (OEFC) is an agency of the Province and was established by the *Electricity Act, 1998* as the legal continuation of the former Ontario Hydro.

OEFC's mandate includes servicing and retiring the former Ontario Hydro's debt and certain other liabilities.

- OEFC inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. The debt was accumulated by building Ontario's electricity generation and transmission infrastructure.

- A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets

OEFC receives dedicated revenues to service and retire the stranded debt from a number of sources, including payments in lieu of taxes (PILs) from Ontario Power Generation (OPG), Hydro One and municipal electricity utilities (MEUs); Electricity Sector Dedicated Income from the Province in respect of the net incomes of OPG and Hydro One; and the Debt Retirement Charge paid by electricity users, as provided for by the *Electricity Act, 1998*.

Q. When will the OEFC's 2015-16 Annual Report be released publicly?

A. The 2015-16 Annual Report is currently being prepared. Under the Electricity Act, 1998, the time frame for preparing and submitting the Annual Report may be extended to reflect the timeframe for Public Accounts. Given the changes to the Electricity Act and significant activities during 2015-16 that affected OEFC, it was prudent to take additional time to review the impacts on OEFC in preparing the financial results for 2015-16..

- OEFC’s annual reports contain OEFC’s audited financial statements which are also released as part of the Province’s Public Accounts

    - OEFC's audited 2014-2015 financial statements, including the notes to the financial statements, were released on Sep 28, 2015 in Volume Two of the 2014-15 Public Accounts.

- The Auditor General audits OEFC’s annual financial statements and has provided an unqualified opinion every year since the initial 1999-2000 financial statements.

- Public Accounts may be downloaded from the Ministry of Finance web site (http://www.fin.gov.on.ca/en/budget/paccts/).

- OEFC’s past Annual Reports (1999-2000 to 2014-2015) can be downloaded from the OEFC website. (http://www.oefc.on.ca/publications.html).

- A spreadsheet containing OEFC's historical financial statements can be accessed on OEFC’s website (http://www.oefc.on.ca/pdf/OEFC_financials_historicals_en.xls)

Q. What is the difference between stranded debt and unfunded liability?

A. The Ontario Electricity Financial Corporation (OEFC) inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. The debt was accumulated by building Ontario's electricity generation and transmission infrastructure. This amount included $30.5 billion in total debt.

A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets.

OEFC's initial unfunded liability of $19.4 billion as at April 1, 1999, was the stranded debt adjusted for $1.5 billion of additional assets, including primarily an accounting asset for deferred debt charges.

Q. What was the origin of the residual stranded debt?

A. The Ontario Electricity Financial Corporation (OEFC) is one of five entities established by the *Electricity Act, 1998*, as part of the restructuring of the former Ontario Hydro. OEFC's mandate includes servicing and retiring the debt and other liabilities of the former Ontario Hydro.

- OEFC inherited $38.1 billion in total debt and other liabilities from the former Ontario Hydro when the Ontario electricity sector was restructured on April 1, 1999. A portion of the $38.1 billion was supported by the value of the assets of Ontario Hydro successor companies, leaving $20.9 billion of stranded debt not supported by those assets.

- As of April 1, 1999, the present value of future payments-in-lieu of taxes and electricity sector dedicated income was estimated at $13.1 billion. Subtracting the $13.1 billion from stranded debt of $20.9 billion resulted in a difference of $7.8 billion, the initial estimated residual stranded debt.

The *Electricity Act, 1998* was amended by the *Budget Measures Act, 2015* and, effective December 10, 2015, all reference to the "stranded debt" and "residual stranded debt", including the regulation-making authority of Ontario Regulation 89/12, were repealed. This included the removal of the requirement to determine the residual stranded debt from time-to-time and the regulation-making authority for O. Reg. 89/12 – rendering the regulation obsolete. On February 11, 2016, the government filed Ontario Regulation 20/16 revoking Ontario Regulation 89/12.

Q. How does OEFC provide financial assistance to the successor corporations of Ontario Hydro? Are these loans added to residual stranded debt/outstanding liabilities?

A. Consistent with its mandate, OEFC provides financial assistance to the successor corporations of Ontario Hydro, namely Ontario Power Generation (OPG) and the Independent Electricity System Operator (IESO). For example, financing is provided by OEFC for new generation development projects such as the Niagara tunnel project.

OEFC borrows to provide these loans, thereby increasing its debt portfolio, but with an offsetting asset (Notes and Loan Receivables) from the companies, thereby not affecting the unfunded liability ("stranded debt") on OEFC's balance sheet.

Q. What is the "due from the Province of Ontario" payment?

A. Due from Province

The Due from Province of Ontario that appears in OEFC's financial statements represents the cumulative value of the Electricity Sector Dedicated Income (ESDI) since April 1, 1999.

ESDI reflects the Province's commitment to dedicate its cumulative combined net income of OPG and Hydro One in excess of the Province's interest cost of its investment in its electricity subsidiaries to OEFC.

- For example, the combined net incomes of OPG and Hydro One in 2014-15 was $1,558M, and the Province's interest cost in acquiring the equity in the two companies totals about $520 million annually. This resulted in an ESDI of $1,038 million in 2014-15, so the ESDI Due from Province of Ontario increased from $3,865 million as of March 31, 2014, to $4,903 million as of March 31, 2015.

The ESDI commitment is reflected in Public Accounts as a transfer payment to OEFC from the Province's Consolidated Revenue Fund and is authorized by a voted appropriation.

CORPORATE AND ELECTRICITY FINANCE DIVISION

Asset Optimization and the Trillium Trust

Q: What asset optimization initiatives did the Province move forward with in 2014-15?

A: On February 4, 2015, the Province completed the sale of its remaining 36.7 million GM common shares for total proceeds of $1.55 billion, resulting in a fiscal gain of $1.08 billion.

General Motors also redeemed the Province's preferred shares on December 31, 2014, for total proceeds of $0.16 billion, including a gain of $0.02 billion.

The $1.1 billion gain on the sale of the common and preferred shares exceeded the $900 million asset optimization target included in the 2014 Budget for 2014–15 Net Revenue Gains from Asset Optimization.

The Ontario government directed the gain from the sale, including the additional $200 million generated above the 2014 target, to the Trillium Trust. The Province also directed to the Trillium Trust the $249 million net proceeds from the September 2013 sale of the Province's interest in 10 million shares of GM.

Q: The 2014-15 Public Accounts showed that the sale of GM shares provided revenue benefits to the Province. Is the Province selling assets to improve the path to balance?

A: The government's plan to balance the budget is centred on:

- Responsibly Managing Spending
- Transforming and Modernizing Government
- Addressing the Underground Economic and Tax Compliance
- Investing Strategically to Grow the Economy

The government's plan to eliminate the deficit does not depend on the revenues from asset sales. Maximizing the value of these assets is part of the government's economic plan for Ontario. The net revenue gains from these transactions are helping the government to deliver on its plan by investing in infrastructure.

The *Trillium Trust Act, 2014*, provides for the dedication of net revenue gains associated with the sale of designated assets to the Trust to help fund investments in transit, transportation and other priority infrastructure under Moving Ontario Forward.

Q: What's the status of the funds in the Trillium Trust?

A: The Public Accounts of Ontario 2014-2015, published in September 2015, show that $1.35 billion has been dedicated to the Trillium Trust.

These are the net proceeds from the sale of the Province's remaining General Motors common shares in early 2015, combined with net proceeds from a September 2013 GM share sale and the redemption of preferred shares in late 2014.

On August 30, 2016, the Province announced the dedication of $3.2 billion from the sale of Hydro One shares in 2015 to the Trillium Trust.

This brings the total balance of the Trillium Trust to over $4.5 billion, to help fund further investments in transit, transportation and other priority infrastructure as part of Moving Ontario Forward.

- The $3.2 billion credit to the Trillium Trust comes from:
    - About $0.8 billion in gains on sale from the sale of Hydro One shares in November 2015.
    - The net benefit to the Province of about $2.4 billion from Hydro One's recognition of the deferred tax benefit.

Q: When will the government actually start using funds from the Trillium Trust to pay for transit and infrastructure?

A: As outlined in the 2016 Budget, the government plans to begin drawing down on the balance in the Trillium Trust in 2016-17 to support the largest investment in public infrastructure in Ontario's history. Based on planned expenditures, in 2016-17 the Trillium Trust would support Moving Ontario Forward initiatives, such as

- Regional Express Rail (RER);
- Hurontario Light Rail Transit (LRT); and
- Ontario Community Infrastructure Fund.

Like most large infrastructure investments, initial spending on Moving Ontario Forward projects is focused on planning, design, property acquisition and other activities to get projects construction-ready. This will allow for identification for expenditures, as this preliminary work is completed and construction activity

becomes underway, and for cash flow timing requirements from the Trillium Trust during 2016-17 and subsequent years.

Q: What is the current status of broadening Hydro One ownership?

A: The Province completed the Hydro One initial public offering (IPO) in November 2015 and raised approximately $1.83 billion in gross proceeds and about $116 million from related share sales. As announced in early May, a secondary offering of Hydro One shares raised approximately $1.97 billion in gross proceeds, and as announced in July, the Province has an agreement in principle to sell to First Nations in Ontario up to 2.5% of Hydro One shares at a price of $18 per share.

There were other associated benefits in connection with the IPO, including a positive impact to the Province's income from Hydro One as a result of a deferred tax benefit recorded by Hydro One. The Province also received cash of $1 billion in special payments from Hydro One, including $800 million in a special dividend paid prior to the IPO, and about $200 million in additional payments in lieu of taxes to the Ontario Electricity Financial Corporation (OEFC).

On August 30, 2016, the Province announced the dedication of $3.2 billion from the sale of Hydro One shares in 2015 to the Trillium Trust, bringing total balance of the Trillium Trust to over $4.5 billion. The net revenue gains from the secondary offering in April 2016 will be credited to the Trillium Trust in the future.

The Province will proceed with future offerings in a staged and prudent manner, over time reducing its stake to 40 per cent while remaining the largest shareholder.

Through this initiative, the Province expects to generate $4 billion in net revenue gains that, through the Trillium Trust, will be reinvested in infrastructure under Moving Ontario Forward, and $5 billion to reduce debt.

Q: In April 2015, the Premier's Advisory Council on Government Assets estimated Hydro One's valuation at between $13.5 billion and $15 billion; using this estimate, the province could realize up to $9 billion from the sale of 60% of Hydro One. Does the Province still expect these benefits?

A: The Province is on track to generate approximately $9 billion in gross proceeds and other revenue benefits from broadening the ownership of Hydro One, while remaining the largest single shareholder.

Through this initiative, the Province expects to generate $4 billion in net revenue gains that, through the Trillium Trust, will be reinvested in infrastructure under Moving Ontario Forward, and $5 billion to reduce debt.

Q: In moving forward with broadening Hydro One ownership, isn't the government giving up future revenues from the company?

A: While broadening ownership in a revenue generating asset means that there may be an impact on revenues over the longer term, the fiscal impact of an asset sale includes upfront gains that the government will reinvest into public infrastructure, improving the lives of Ontarians where they live, work and play. In turn, this will create jobs, generate economic growth and additional revenues for the Province.

- The Province would also retain 40 per cent of Hydro One, following the IPO and subsequent share offerings, which would continue generating revenue for the Province.

Q: Why did the government remove certain oversight powers of the Office of the Auditor General over Hydro One?

A: To support Hydro One's transition from being wholly-owned by the Province to being publicly traded, the government agreed with the Premier Advisory Council's recommendations that the company should operate, to the extent possible, in the same legislative and regulatory environment as other publicly–traded, rate-regulated entities.

However, the Province has ensured Hydro One oversight measures are in place. Hydro One continues to be subject rate regulation by the Ontario Energy Board (OEB) and as a publicly traded company Hydro One is subject to requirements of the Business Corporations Act (Ontario) and the Securities Act (Ontario).

To further ensure the protection of ratepayers, the government required Hydro One to create a dedicated Ombudsperson, similar to those found at other publicly traded companies. The Ombudsperson is able to receive and investigate customer complaints.

The government has also put in place a governance agreement and registration rights agreement with Hydro One to clarify the Province's role as investor, including the process through which the Province nominates 40 per cent of the board of directors and the Province's rights related to future share sales by the Province or Hydro One.

The government will remain, by law, the largest single shareholder in Hydro One – and no other single shareholder or group of shareholders will be permitted to hold more than 10 per cent of the company's shares.

Q: What is the status of the potential merger between Hydro One Brampton and a group of urban local distribution companies (LDCs)?

A: The proposed merger of Hydro One Brampton with PowerStream, Enersource, and Horizon Utilities, continues to move forward.

The municipal councils for the cities of Barrie, Markham, Vaughan, Mississauga, Hamilton and St. Catharines have all voted to proceed with the merger. Ontario has also executed a Share Purchase Agreement with PowerStream, Enersource, and Horizon.

Commercial closing of the transaction would be subject to certain closing conditions, including Ontario Energy Board (OEB) approval. The proposed merger is currently being reviewed by the OEB.

- The proposed merger of these three strong performing utilities with Hydro One Brampton would create the second-largest electricity distributor in Ontario by number of customers. The merged entity would deliver efficiencies and economies of scale while continuing to provide safe, reliable and clean electricity.

Q: Will the Province realize any up-front benefit from the sale / merger of Hydro One Brampton with other local distribution companies (LDCs)? Would these benefits go to the Trillium Trust or to the Ontario Electricity Financial Corporation (OEFC)?

A: The purchasers have agreed to pay $607 million for Hydro One Brampton, subject to post-closing adjustments and regulatory approval from the Ontario Energy Board (OEB).

The *Trillium Trust Act, 2014*, ensures that net revenue gains from the sale of Hydro One Brampton shares would be credited to the Trillium Trust. Under the Act, the net revenue gains would take into account the gross proceeds less the book value of the asset and costs incurred in the disposition of the asset.

The *Electricity Act, 1998*, also allows the Province to meet its obligations to OEFC by, for example, relieving OEFC of certain debt obligations that it currently owes to the Province.

Q: Why is Hydro One Brampton being merged with three other urban local distribution companies – Powerstream, Horizon Utilities, and Enersource? Why wasn't there a competitive process for the sale/merger of Hydro One Brampton?

Together these utilities can take advantage of efficiencies of scale and resources sharing, which in turn could translate into savings for their respective ratepayers.

In the course of its Phase 2 consultations, the Premier's Advisory Council received a strong pre-emptive bid from the consortium of local distribution companies (LDCs) at the higher end of the indicative values identified in the Council's market soundings.

Such a merger will provide a much needed catalyst for wider Local Distribution Company consolidation.

As noted by the Auditor General in her 2015 Annual Report, based on information provided to the Office of the Auditor General (OAG) by Hydro One and the Ministry of Energy, the OAG's estimates that the purchase price is reasonable for Hydro One Brampton Networks, and would provide the province with a fair return on its investment.

From:	Mike Manning
To:	"Tim Van Alstyne (Scotiabank GBM)"
Cc:	Mark Hadden (Scotiabank GBM)
Subject:	RE: Meeting tomorrow
Date:	Tuesday, March 28, 2017 1:00:21 PM

Thanks for working to set this up.
Mike

-----Original Message-----
From: Tim Van Alstyne (Scotiabank GBM) [mailto:tim.vanalstyne@scotiabank.com]
Sent: Tuesday, March 28, 2017 12:22 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Mark Hadden (Scotiabank GBM) <mark.hadden@scotiabank.com>
Subject: Meeting tomorrow

Hi Mike
The team is confirmed for 11 AM tomorrow if that changes please coordinate with Mark. Coming from Scotia Bank will be Mark Hadden, Doug Noe managing director, head of securitization Greg Lawrence, managing director head of DCM energy And Derrick Chu Energy representative from investment banking.

Good luck and we'll chat on Friday.

Cheers

Tim

Sent from my iPhone
This e-mail and any attachments may contain confidential or privileged information. If you are not an intended recipient, do not re-send, copy or use this e-mail. Please also contact the sender immediately and delete this e-mail in its entirety. Privilege is not waived by reason of mistaken delivery to you. The Bank of Nova Scotia (Scotiabank) and its affiliates accept no liability whatsoever for loss or damage in relation to this e-mail and may monitor, retain and/or review email. Opinions expressed in this e-mail are those of the author and may not represent the opinions of The Bank of Nova Scotia (Scotiabank) and its affiliates. Trading instructions received by e-mail or voicemail will not be acted upon.

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From:	Ronald Kwan
To:	Gadi Mayman; Mike Manning; Ken Kandeepan
Cc:	Anna Strathy; Gavin He
Subject:	RE: Minister Letter to OPG
Date:	Tuesday, April 18, 2017 11:06:01 AM

Thanks Gadi.

Ron

From: Gadi Mayman

Sent: April-18-17 11:04 AM

To: Ronald Kwan ; Mike Manning ; Ken Kandeepan

Cc: Anna Strathy ; Gavin He

Subject: Fw: Minister Letter to OPG

From: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca>
Sent: Tuesday, April 18, 2017 11:02 AM
To: Gadi Mayman
Subject: FW: Minister Letter to OPG

From: Katona, Keley (ENERGY)

Sent: April 13, 2017 5:42 PM

To: Hume, Steen (ENERGY); Calwell, Carolyn (ENERGY/MEDEI/MRI); Nelms, Scott (MOF)

Subject: Fw: Minister Letter to OPG

From: Keley.Katona@ontario.ca
Sent: Thursday, April 13, 2017 5:41 PM
To: HARTWICK Ken -FINANCE
Cc: Imbrogno, Serge (ENERGY); KING Catriona -OFFCORPSEC
Subject: Re: Minister Letter to OPG

Attached is the signed letter.

From: Katona, Keley (ENERGY)
Sent: Thursday, April 13, 2017 3:49 PM
To: HARTWICK Ken -FINANCE
Cc: Imbrogno, Serge (ENERGY); KING Catriona -OFFCORPSEC
Subject: Re: Minister Letter to OPG

Thanks Ken, we've incorporated your changes.

Sent from my iPad

On Apr 13, 2017, at 2:49 PM, HARTWICK Ken -FINANCE <ken.hartwick@opg.com> wrote:

> Keley
>
> See the recommended changes to the letter. I reviewed these with the accounting team and both are needed to ensure the effective consolidation of the SPV into OPG. In particular the first change is critical. The second is important as the activity we undertake needs to be in the interest of OPG recognizing that the ratepayer impact is critical.
>
> Thanks
>
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From:	Nelms, Scott (MOF)
To:	Mike Manning
Subject:	RE: OEFC equity infusions to OPG
Date:	Thursday, March 09, 2017 8:38:20 AM
Attachments:	Summary of Work Plan.docx Ontario"s Fair Hydro Plan - Draft Financing Workplan.xlsx

---

Hi Mike,
Here are two documents that OPG shared last night. Later today, I will send around a few more documents along with a summary of a meeting taking place this morning.
For the working level group discussed with OPG yesterday, would you like to be invited? Anyone else from your group?
Thanks,
Scott

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 9, 2017 8:33 AM
To: Nelms, Scott (MOF)
Subject: RE: OEFC equity infusions to OPG
Hi Scott:
Any chance of getting a copy of that schedule John mentioned yesterday?
Thanks, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, March 08, 2017 9:53 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OEFC equity infusions to OPG
Thanks Ron, Mike. Looks like 3:30-4:30 is the timeslot that works for everyone. Ron, if you have to drop off at 4 that's ok. This is likely the first of many conversations.

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: March 8, 2017 8:40 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Re: OEFC equity infusions to OPG
Hi Scott,
Sure. Preferably between 1 and 4.
Ron

On Mar 8, 2017, at 8:18 AM, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca> wrote:

> Hi Mike, Ron,
> OPG has asked to meet with the Province to talk about financing arrangements for the Fair Hydro Plan. Gadi suggested that you would be the appropriate points of contact for this stream of work. I know this is short notice, but wonder if you might have availability to start the conversation with OPG this afternoon. I am going to pull in Energy staff as well and will send around an invite once we find a

time that works.

Thanks,

Scott

Scott Nelms
Electricity Investment and Governance Secretariat | Ministry of Finance
7th Floor | 375 University ave. | Toronto, ON
w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

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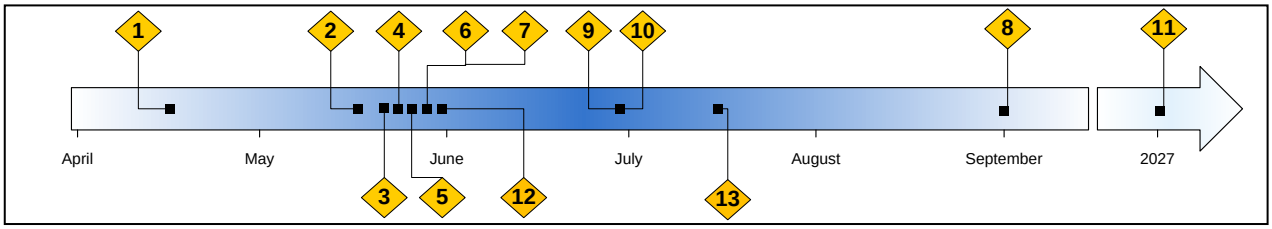
Summary of Work Plan

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.



[Note deleted #13]

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.
  1. These amendments would be similar in nature to previous amendments made to Hydro One's governing provisions in the Electricity Act.
  2. The amendments would, for example, allow OPG to create and operate through subsidiaries, and also enable OPG to raise financing through public offering of debt. (OPG may need to raise some financing to fund a portion of the subordinated debt going into the trust.)
- The electricity legislation will be amended to implement the deferral and financing of the GA, including amendments:
  1. to reflect that the IESO may defer collection of a portion of the GA;
  2. to create a "regulatory asset" consisting of the right to recover, over time, the amount GA being deferred, together with interest and other financing costs;
  3. to allow the IESO to sell that regulatory asset to a third party (the trust/financing vehicle);
  4. 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
  5. that also provides the OEB with no rights (or very limited rights) to review the terms on which the GA deferral is recovered (i.e. the interest rate, other financing costs and the amortization period). (This is needed to make the GA deferral financeable in the capital markets.)

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 A – Terms Necessary for OPG to Consolidate the Global Adjustment Trust.

ONTARIO'S FAIR HYDRO PLAN

Draft Financing Workplan

Item # Structures / Components / Processes

1 Legislative Requirements

[Stakeholders: OPG, IESO, OEB, MOE]
[Primary process owner:]
[Key contributor:]

Characteristics of Regulatory Asset

- Purchaser has right to require IESO to collect amount in accordance with repayment/amortization schedule including financing & administration costs
- Regulatory asset not subject to claim or counterclaim by IESO or successor entity
- Any action taken by Province or regulator that limits, alters or impairs regulatory asset or reduces ability of IESO to recover amounts - the purchaser or trustee will have right of action against the Province for damages
- Legislation must allow IESO to sell regulatory assets to a third party (Trust) and supports sales & service agreement
- True sale - right, title and interest in regulatory asset is not property of the seller and could not be otained by creditors of the seller
- Trust has unencumbered ownership / security interest in the regulatory asset and no outstanding liens or security interests in the regulatory asset that could compromise trustee's interest
- OEB will recognize such regulatory assets and allows asset owner to recover related principal, financing & administration costs over time
- True-up mechanism required to recover all actual principal, financing & administration cost

Financing Process

2 *Set up financing vehicle*

[Stakeholders: OPG, IESO]
[Primary process owner:]
[Key contributor:]

- Declaration of Trust
- Simplified trust indenture for flexible financing including:
  - ability to warehouse
  - issue short-term debt (ABCP, bank facility)
  - issue long-term debt (notes, corporate bonds, ABS)
  - issue in Canadian and US markets
  - enter into cross currency swaps
    - collateral issues may arise
- Sole purpose is to acquire regulatory asset and raise debt
  Trust governance
  - narrow scope for enhanced financeability
  - no precedence for "operating trust" as cost recovery vehicle
- Trust authority structure
- Financial services and management agreement with OPG
  Oversight
  - review of management plan by oversight committee
  - oversight committee responsibilities includes:
    - approval of financial strategy
    - overall assessment of performance
    - review of operating budget
    - periodic review of management reports
  Operations (see Ford Trust example)
  - deal execution
  - operating cash management (IESO)
  - regulatory reporting (OEB)
  - coordinate credit rating agency reviews
- Sales & servicing (passthrough) agreement with IESO
- Administrative services agreement
  - billing and other administrative services
  - administrative payment services
- Banking arrangements
- Subordinated debt agreement with OPG
- Credit rating agency requirements considered
- OEB role - oversight on administration costs of the trust - see White Paper for process

ONTARIO'S FAIR HYDRO PLAN

Draft Financing Workplan

Item # Structures / Components / Processes

3 **Equity injection process**
[Stakeholders: OPG, MOE, MOF]
[Primary process owner:]
[Key contributor:]

- Determine the parties required to be involved - MOE, OEFC, Corp Secretary, Treasury, etc.
- Approvals
- Frequency
- Develop process to obtain injection
- Requirements from Province
- OPG Board approval - approval for specified number of shares
  - Approved amount sufficient for 1-2 years
  - Shares approved but not issued
  - Actual # issued based on IESO forecast for funds
- Shareholder approval

IESO & Trust Operational Process

4 *Purchase (Trust) and sale (IESO) of regulatory asset*
[Stakeholders: OPG, IESO]
[Primary process owner:]
[Key contributor:]

- Timing - notice period to trust
- Frequency
- Flow of funds
- Basis of regulatory asset - GA shortfall, proposed recovery profile, true-up mechanism
- Executed under sales & servicing agreement
- Approvals - requirements to support financing
- Trust administrator requirements
- Source of funds for the trust
- Provide GA funding forecast for planning purposes

5 *Debt issuance - general planning*
[Stakeholders: OPG, MOF]
[Primary process owner:]
[Key contributor:]

- Need for liquidity/working capital facility
- Determine debt profile - short / long / combination
- Determine debt composition - senior / subordinated
- Identify market to access - Canada and US
- Determine debt issuance plan - how much, when, what market
- Potential credit rating agency legal opinions:
  - True sale
  - Bankruptcy remoteness
  - Non-consolidation
  - Legal existence, power & authority of seller, SPV/trust, etc.
  - Tax implications
- Final and irrevocable - recovery / regulatory asset not exposed to legislation changes
- Board approval of financing plan

6 *Debt issuance - subordinated*
[Stakeholders: OPG]
[Primary process owner:]
[Key contributor:]

- Subordinated debt characteristics - risk, return, cash flows
- Ability to repay sub debt - need to ensure no restriction in trust indenture
- Approvals
- Frequency
- Timing

ONTARIO'S FAIR HYDRO PLAN

Draft Financing Workplan

Item # Structures / Components / Processes

7 *Debt issuance - short term*
[Stakeholders: OPG]
[Primary process owner:]
[Key contributor:]

- Initial funding - OPG to fund via subordinated debt - need 50% external in OPG by quarter end (CP?)
- Can trust issue CP to an ABCP conduit?
- Ongoing funding - issue in accordance with plan
- Any involvement of trust administrator in subordinated debt for short term requirements?

8 *Debt issuance - long term*
[Stakeholders: OPG]
[Primary process owner:]
[Key contributor:]

- Select bank advisor for Canadian market
- Select bank advisor for US market
- Select credit rating agency and discuss high investment grade requirements
- Legal opinions required - the 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
- Roadshow presentation and one-on-one investor meetings
- Assume standard role for trust administrator
- 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]
[Primary process owner:]
[Key contributor:]

- Basis of cost - actual or accrued
- Documentation requirements - invoice / statement / other
- Timing - day of month issued to IESO / day of month paid to trust
- Approvals - IESO requirements / trust requirements
- Frequency - monthly
- GA recovery rights assumed to be pari passu

10 *Paying interest, administration and other financing costs to providers*
[Stakeholders: OPG, IESO]
[Primary process owner:]
[Key contributor:]

- Basis of cost - who reviews
- Documentation requirements - invoice / statement / other
- Timing - dependent on financing? Does trust pay first and then recovers from IESO?
- Approvals - does service agreement establish?
- Bank accounts - who controls accounts and has access?
- Payments - who executes payments - trust administrator or OPG through administrative services agreement?
- Frequency - as required

ONTARIO'S FAIR HYDRO PLAN

Draft Financing Workplan

Item # Structures / Components / Processes

11 *Recovering principal from IESO*
[Stakeholders: OPG, IESO]
[Primary process owner:]
[Key contributor:]

- Basis of recovery - regulatory asset schedule / actual financing amortization or maturity / other method
- Documentation requirements - invoice / statement / other
- Timing - day of month issued to IESO / day of month paid to trust
- Approvals - does service agreement establish?
- Frequency - monthly

Accounting Process

12 *Establish overall accounting requirements for trust, regulated asset, consolidation with OPG, operational control of trust, restrictions on regulated asset*
[Stakeholders: OPG]
[Primary process owner:]
[Key contributor:]

- Requirements to capture regulated asset in trust
  - IESO recognition
  - Control / restriction on recovery characteristics of regulatory asset
- Requirements to consolidate trust with OPG
  - See separate Accounting tab for detailed characteristics
- Regular accounting - who does and how captured. May depend on reporting / performance requirements identified in item 13 below.

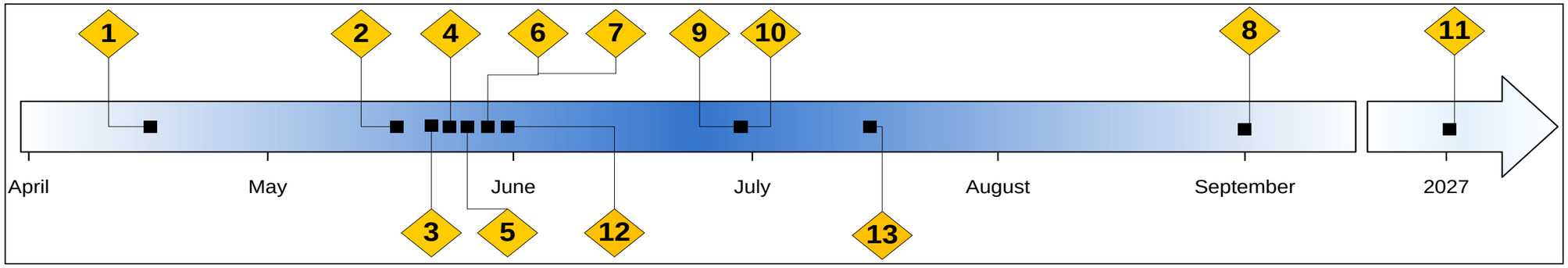
Reporting / Monitoring Process

13 *Establish reporting requirements for trust, regulated asset, and financing*
[Stakeholders: OPG]
[Primary process owner:]
[Key contributor:]

- Reporting requirements of -
  OPG Board, OEB, IESO, OPG management, Province, etc.
- Management and performance reporting - interest rate, administration cost, etc.

ONTARIO'S FAIR HYDRO PLAN

Draft Financing Timeline



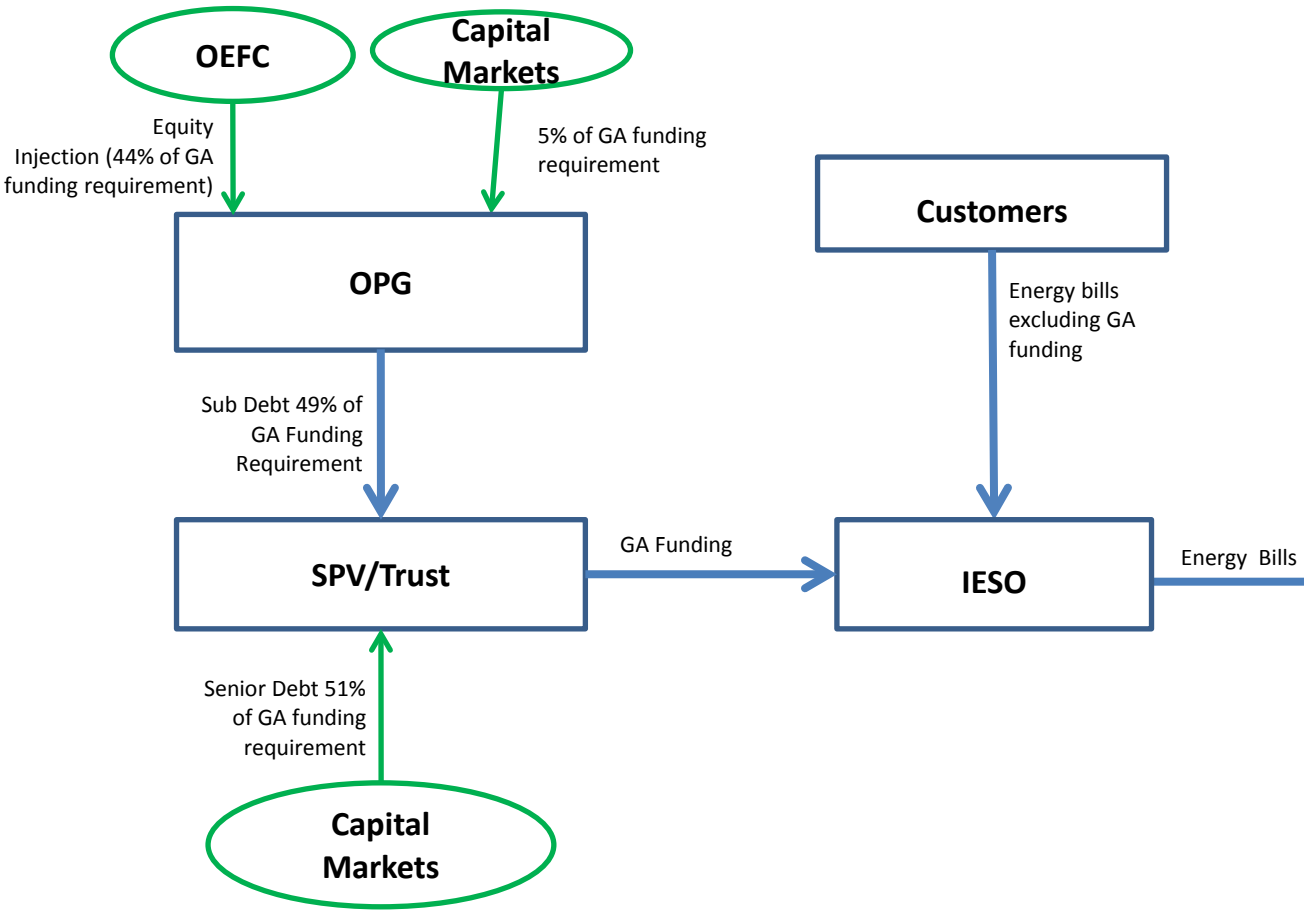
1 Legislative Requirements
2 Set up financing vehicle
3 Equity injection process
4 Purchase (Trust) and sale (IESO) of regulatory asset
5 Debt issuance - general planning
6 Debt issuance - subordinated
7 Debt issuance - short term
8 Debt issuance - long term
9 Recovering interest, administration and other financing costs from IESO
10 Paying interest, administration and other financing costs to providers
11 Recovering principal from IESO
12 Establish overall accounting requirements for trust, regulated asset, consolidation with OPG, operational control of trust, restrictions on regulated asset
13 Establish reporting requirements for trust, regulated asset, and financing

CONFIDENTAL **21-Feb-17**

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: a. The Trust b. Any of OPG's investments in the Trust 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: 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 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 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. 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. 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. 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.

Issue	No.	Requirements
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.


OEFC
Capital Markets
Equity Injection (44% of GA funding requirement)
5% of GA funding requirement
Customers
OPG
Energy bills excluding GA funding
Sub Debt 49% of GA Funding Requirement
SPV/Trust
GA Funding
IESO
Energy Bills
Senior Debt 51% of GA funding requirement
Capital Markets

Generators & Other
Industry Participants

1 **EQUITY INJECTION**

Determine optimal method of issuing shares (treasury, subscription, etc)	
Determine which branch of Province is the Shareholder	
Obtain authority from Board and Shareholder to issue new shares	
Establish process with Shareholder (or other) to issue shares on continual basis	
Determine timing for issuances (monthly, quarterly, yearly)	Requires Sub Debt and GA Funding Processes to be complete

2 **CAPITAL MARKETS BORROWING FOR GA FUNDING**

Determine borrowing vehicle (CP?)	
Will process be any different than issuing CP for regular corporate purposes?	
Determine timing for issuances (monthly, quarterly, yearly)	Requires Sub Debt and GA Funding Processes to be complete

3 **SETUP TRUST/SPV**

Declaration of Trust	
Trust governance	
Hire trust administrator?	
Services agreement with OPG	
Banking arrangements	

4 **SUB DEBT FUNDING FOR TRUST**

Determine Sub Debt characteristics (risk, return, cashflows)	
Ability to unwind explicitly or implicitly	
Interest rate setting process	
Sub Debt agreement with OPG	Requires Trust to be setup / Reg Asset Legislation
Determine timing for funding	Requires GA Funding Process to be complete

5 **CAPITAL MARKETS FUNDING FOR TRUST**

Determine Debt characteristics (risk, return, cashflows)	Requires Reg Asset Legislation
Determine which markets to issue debt in (capacity of markets)	Requires Trust to be setup / Reg Asset Legislation
Master Trust Indenture and Supplemental - CAN and US?	
Select Rating Agency	
Select CAN market advisor	
Select US market advisor	
Develop roadshow presentations	
Determine timing for funding	Requires GA Funding Process to be complete
Arrange for cross currency swaps for US debt	
Ability to unwind explicitly or implicitly	

6 **CREATION OF REGULATORY ASSET/COLLECTION RIGHTS**

Determine characteristics of Regulatory Asset (principal only, principal + forecast interest, principal + actual interest)

Establish mechanism for IESO to create Regulatory Asset
Get necessary attributes (property rights) of Regulatory Asset into legislation (protect asset's value, monthly draws)
Establish OEB's involvement in the process

7 **GA FUNDING / COLLECTION RIGHT PURCHASE**
Establish process with IESO to purchase Regulatory Asset
Purchase and Sale agreement between Trust and IESO
IESO gives Trust Purchase Request in return for funds (principal amount)
Regulatory Asset - right to collect principal (and interest?) in future
Determine how to handle interest and management fees

From: Mike Manning
To: Scott Nelms (ENERGY)
Subject: RE: OEFC equity infusions to OPG
Date: Thursday, March 09, 2017 8:32:49 AM

Hi Scott:
Any chance of getting a copy of that schedule John mentioned yesterday?
Thanks, Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, March 08, 2017 9:53 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OEFC equity infusions to OPG

Thanks Ron, Mike. Looks like 3:30-4:30 is the timeslot that works for everyone. Ron, if you have to drop off at 4 that's ok. This is likely the first of many conversations.

From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: March 8, 2017 8:40 AM
To: Nelms, Scott (MOF)
Cc: Manning, Mike (OFA)
Subject: Re: OEFC equity infusions to OPG

Hi Scott,

Sure. Preferably between 1 and 4.

Ron

On Mar 8, 2017, at 8:18 AM, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca> wrote:

> Hi Mike, Ron,
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> OPG has asked to meet with the Province to talk about financing arrangements for the Fair Hydro Plan. Gadi suggested that you would be the appropriate points of contact for this stream of work. I know this is short notice, but wonder if you might have availability to start the conversation with OPG this afternoon. I am going to pull in Energy staff as well and will send around an invite once we find a time that works.
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> Thanks,
> Scott
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> Scott Nelms
> Electricity Investment and Governance Secretariat | Ministry of Finance
> 7th Floor | 375 University ave. | Toronto, ON

w: (416) 212-6469 | c: (647) 330-2681
scott.nelms@ontario.ca

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From: Nelms, Scott (MOF)
To: Ronald Kwan
Cc: Mike Manning
Subject: RE: OEFC equity infusions to OPG
Date: Wednesday, March 08, 2017 9:53:06 AM

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From: Mike Manning
To: Scott Nelms (ENERGY); Ronald Kwan
Subject: RE: OEFC equity infusions to OPG
Date: Wednesday, March 08, 2017 8:21:52 AM

Hi Scott:
I can fit into most times this afternoon.
Mike

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Wednesday, March 08, 2017 8:19 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Subject: OEFC equity infusions to OPG

Hi Mike, Ron,

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Thanks,
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scott.nelms@ontario.ca

From:	Mike Manning
To:	Scott Nelms (ENERGY)
Subject:	RE: OEFC equity infusions to OPG
Date:	Thursday, March 09, 2017 8:38:47 AM

Many thanks

From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Thursday, March 09, 2017 8:38 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OEFC equity infusions to OPG

Hi Mike,

Here are two documents that OPG shared last night. Later today, I will send around a few more documents along with a summary of a meeting taking place this morning.

For the working level group discussed with OPG yesterday, would you like to be invited? Anyone else from your group?

Thanks,
Scott

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 9, 2017 8:33 AM
To: Nelms, Scott (MOF)
Subject: RE: OEFC equity infusions to OPG

Hi Scott:
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Thanks, Mike

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From:	Ken Kandeepan
To:	Mike Manning; Ronald Kwan
Cc:	Gavin He
Subject:	RE: OFA : IESO
Date:	Thursday, April 13, 2017 11:22:06 AM
Attachments:	image001.png

How about the morning, I can make myself available from 8 Am onwards
Thanks
Ken k

From: Mike Manning
Sent: Thursday, April 13, 2017 11:17 AM
To: Ronald Kwan ; Ken Kandeepan
Cc: Gavin He
Subject: RE: OFA : IESO

Sorry, 3:00 or 3:30 don't work for me.
Mike

From: Ronald Kwan
Sent: Thursday, April 13, 2017 11:14 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

Hi Mike,
Are you available? You had stated a preference for 2:30.
Ron

From: Ken Kandeepan
Sent: April-13-17 11:13
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

Thanks Ron, I have IDLC at Frost from 2 to 3Pm is it possible to move this to 3 or 3.30PM.
Thanks again and sorry for the hassle.
Ken k

From: Ronald Kwan
Sent: Thursday, April 13, 2017 11:07 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

Hi Ken,
Sure. IESO is setting up a call for Tuesday afternoon, likely 2:30.
Ron

From: Ken Kandeepan
Sent: April-13-17 10:54
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>

Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Subject: RE: OFA : IESO

Thanks, Ron, can you pls include me in the IESO credit needs meeting, since Cindy and I are having a number of discussions, with and without OPG, on developing a comprehensive accounting model for the GA smoothing, I need to be aware of all potential impacts to the model.
Thanks
Ken K

From: Gadi Mayman
Sent: Thursday, April 13, 2017 10:47 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: Re: OFA : IESO

Thanks, this came up at this morning's rate mitigation meeting, and the IESO people were happy to hear that we're on this, as they're a little nervous about how they're going to finance the regulatory asset until OPG is set up to take it on and pay for it.
I'm adding Ken to close the loop on the exchange that we had last night about the OPG letter - I asked Serge to add in the OFA, and he instructed Steen to do so, and, yes, the letter will be posted, at some point, on OPG's website.
In the half hour that I was able to attend the meeting, the discussion was around the legislation. The biggest point of contention was about OPG's need to have a direct recourse to ratepayers, and the legislative need for a thread directly from individual ratepayers to the lenders to the GA smoothing. The OEB doesn't like that concept at all. The other point that is of interest to us is that they are not looking at putting the guarantee mechanism into the legislation - although there will be some description in the legislation about what, I think they called indemnification will be needed, and then they will leave the guarantee to a commercial one. No surprise that OPG's dealer advisors are saying they need a full provincial guarantee, which OPG is pushing back on, and saying that the guarantee can only be if a future government changes the value of the regulatory asset (this is where the indemnification language in the legislation is necessary). Cindy, of course, as well as me for different reasons, is fussed about the nature of that guarantee, so we asked if they could sort that out with the dealers before the legislation is tabled. We don't want to end up with the dealers holding OPG hostage six months from now - not that they'd ever do that, would they Mike ?
I'm sure Scott will send out his fuller synopsis later today, and that'll also cover what happened in the last hour, after I'd left.
Gadi

From: Ronald Kwan
Sent: Thursday, April 13, 2017 8:37:54 AM
To: Gadi Mayman
Cc: Mike Manning; Anna Strathy; Gavin He
Subject: Re: OFA : IESO

Hi Gadi,
Will do.
Ron

On Apr 13, 2017, at 8:00 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Hi Mike and Ron, could one of you please get back to Anthony and handle this?
> Thanks,
> Gadi
>
> **From:** Anthony Martinello <Anthony.Martinello@ieso.ca>
> **Sent:** Thursday, April 13, 2017 7:41 AM
> **To:** Gadi Mayman
> **Cc:** Kim Marshall; Michael Boll
> **Subject:** OFA : IESO
>
> Mr. Mayman,
>
> Kim and I would like to set up a 30min call with you to discuss the proposed Fair Hydro rollout and the potential impact on the IESO credit needs.
>
> Would you be available next week/preferred date? Let me know and I will send out a meeting invite.
>
> Regards
>
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From:	Ronald Kwan
To:	Gadi Mayman
Cc:	Mike Manning; Anna Strathy; Gavin He; Ken Kandeepan
Subject:	RE: OFA : IESO
Date:	Thursday, April 13, 2017 11:06:24 AM
Attachments:	image001.png

Hi Gadi,
All very interesting.
On one point, how would a thread directly from individual ratepayers to the lenders to the GA smoothing work? That would seem particularly challenging.
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Sent: April-13-17 10:47
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Cc: Mike Manning ; Anna Strathy ; Gavin He
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From: Ken Kandeepan
To: Ronald Kwan
Cc: Mike Manning; Anna Strathy; Gavin He; Gadi Mayman
Subject: RE: OFA : IESO
Date: Thursday, April 13, 2017 10:53:33 AM
Attachments: image001.png

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From: Mike Manning
To: "Kim Marshall"; Ronald Kwan; Anthony Martinello
Cc: Michael Boll
Subject: RE: OFA : IESO
Date: Thursday, April 13, 2017 10:42:15 AM

Tuesday at 2:30 would work best for me.

Mike

From: Kim Marshall [mailto:Kim.Marshall@ieso.ca]
Sent: Thursday, April 13, 2017 10:37 AM
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Anthony Martinello <Anthony.Martinello@ieso.ca>
Cc: Michael Boll <Michael.Boll@ieso.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OFA : IESO

Apologies, can we pls plan to do this tues or wed after 2:30?

Kimberly Marshall | VP, Corporate Services & CFO
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From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: April 13, 2017 10:22 AM
To: Anthony Martinello
Cc: Kim Marshall; Michael Boll; Mike Manning
Subject: RE: OFA : IESO

Hi Anthony,

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Subject: OFA：IESO

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From: Kim Marshall
To: Ronald Kwan; Anthony Martinello
Cc: Michael Boll; Mike Manning; Georgia Ritchie-Wust
Subject: RE: OFA : IESO
Date: Thursday, April 13, 2017 10:40:32 AM

By cc to Georgia can you pls set up a conf call.

Anthony – can you provide an email for tues with some of our thoughts?

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From: Ronald Kwan [mailto:Ronald.Kwan@ofina.on.ca]
Sent: April 13, 2017 10:39 AM
To: Kim Marshall; Anthony Martinello
Cc: Michael Boll; Mike Manning
Subject: RE: OFA : IESO

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Sent: April-13-17 10:37
To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Anthony Martinello <Anthony.Martinello@ieso.ca>
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Date: Thursday, April 13, 2017 10:39:19 AM

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Sent: April-13-17 10:37

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Cc: "kim.marshall@ieso.ca"; "Michael.boll@ieso.ca"; Mike Manning
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From: Mike Manning
To: Ronald Kwan
Subject: RE: OFA : IESO
Date: Thursday, April 13, 2017 10:09:58 AM

It would be good to call with you. As you know we have two other facilities that are coming up but don't expect they would be part of the discussion. I think we would need to get an idea of their potential credit needs and then go from there.

Mike

From: Ronald Kwan
Sent: Thursday, April 13, 2017 10:06 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: RE: OFA : IESO

Hi Mike,

Did you want to call together? Any issues/questions you'd want to raise?

Ron

From: Ronald Kwan
Sent: April-13-17 08:38
To: Gadi Mayman <Gadi.Mayman@ofina.on.ca>
Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
Subject: Re: OFA : IESO

Hi Gadi,

Will do.

Ron

On Apr 13, 2017, at 8:00 AM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Hi Mike and Ron, could one of you please get back to Anthony and handle this?
>
> Thanks,
> Gadi
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>
> **From:** Anthony Martinello <Anthony.Martinello@ieso.ca>
> **Sent:** Thursday, April 13, 2017 7:41 AM
> **To:** Gadi Mayman
> **Cc:** Kim Marshall; Michael Boll

Subject: OFA：IESO

Mr. Mayman,

Kim and I would like to set up a 30min call with you to discuss the proposed Fair Hydro rollout and the potential impact on the IESO credit needs.

Would you be available next week/preferred date? Let me know and I will send out a meeting invite.

Regards

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From:	Ken Kandeepan
To:	Mike Manning; Ronald Kwan
Cc:	Gavin He
Subject:	RE: OFA : IESO
Date:	Thursday, April 13, 2017 11:22:06 AM
Attachments:	image001.png

How about the morning, I can make myself available from 8 Am onwards
Thanks
Ken k

From: Mike Manning
Sent: Thursday, April 13, 2017 11:17 AM
To: Ronald Kwan ; Ken Kandeepan
Cc: Gavin He
Subject: RE: OFA : IESO

Sorry, 3:00 or 3:30 don't work for me.
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From: Ronald Kwan
Sent: Thursday, April 13, 2017 11:14 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
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Cc: Mike Manning; Anna Strathy; Gavin He
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From:	Mike Manning
To:	Ronald Kwan; Ken Kandeepan
Cc:	Gavin He
Subject:	RE: OFA : IESO
Date:	Thursday, April 13, 2017 11:17:28 AM
Attachments:	image001.png

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To:	Ronald Kwan
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Date:	Thursday, April 13, 2017 11:13:12 AM
Attachments:	image001.png

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Cc:	Gavin He
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Date:	Thursday, April 13, 2017 11:24:17 AM
Attachments:	image001.png

Good from 8:30 to 10:30.
Mike

From: Ken Kandeepan
Sent: Thursday, April 13, 2017 11:22 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

How about the morning, I can make myself available from 8 Am onwards

Thanks

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To: Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

Sorry, 3:00 or 3:30 don't work for me.
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Sent: Thursday, April 13, 2017 11:14 AM
To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: Gavin He <Gavin.He@ofina.on.ca>
Subject: RE: OFA : IESO

Hi Mike,

Are you available? You had stated a preference for 2:30.

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Sent: April-13-17 11:13
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Cc: Mike Manning <Mike.Manning@ofina.on.ca>; Gavin He <Gavin.He@ofina.on.ca>
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From:	Gadi Mayman
To:	Mike Manning; Ken Kandeepan
Cc:	Christina Zhang; Ronald Kwan; Gavin He
Subject:	RE: Provincial Guarantee
Date:	Monday, February 27, 2017 2:34:12 PM

I agree with your perspective on this. The Newfoundland guarantee for the Churchill Falls dam is a good point that I'd forgotten about.

I'm copying Ron and Gavin, as they're preparing a slide for Energy on this.

Gadi

From: Mike Manning
Sent: Monday, February 27, 2017 2:29 PM
To: Gadi Mayman ; Ken Kandeepan
Cc: Christina Zhang
Subject: RE: Provincial Guarantee

Just a few random thoughts:

- I would think OPG borrowing with a guarantee is a game changer. As we've seen with Newfoundland, guarantees can be expensive, and I expect this one would be too, relative to Ontario's regular borrowing costs. If it is going on the Province's balance sheet, shouldn't that be done in the most efficient way. In addition, I'm surprised the Ontario borrowing and on-lending approach doesn't have more traction as it certainly provides more cost-savings potential, and this might definitely be required.
- I'm also unclear of the benefits of OPG direct borrowing, given that it appears to be direct government policy to me, and is anyone going to think otherwise? Again I don't have the full perspective and may be missing some of the rationale.

It would be great to discuss when you have the time.

Mike

From: Gadi Mayman
Sent: Monday, February 27, 2017 12:49 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Christina Zhang <Christina.Zhang@ofina.on.ca>
Subject: FW: Provincial Guarantee

Hi Mike,

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My question is why that guarantee, and therefore the diminishment of risk to investors, is treated differently from an accounting perspective than the simpler process of us just borrowing and on-lending to them.
Please let me know if you have any questions, or would like to discuss this further.
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From: Gadi Mayman
Sent: Monday, February 27, 2017 12:45 PM
To: HARTWICK Ken -FINANCE <ken.hartwick@opg.com>
Cc: 'cindy.veinot@ontario.ca' <cindy.veinot@ontario.ca>
Subject: Provincial Guarantee

Hi Ken, we all had to rush off to our next meetings following our meeting this morning, so we didn't get a chance to have a discussion about why a Provincial guarantee of all of OPG's debt related to the trust isn't a problem for the accounting treatment that we'd need to get to in order to make the GA smoothing plan work, while direct borrowing and on-lending from the Province would be, if it's greater than 49% of the total borrowing (actually 44% in your current model).
From a capital markets, investor and rating agency perspective, the guarantee is extremely likely to be lumped in with the rest of the Province's debt, and the guaranteed debt would be considered just as much of a provincial obligation as the rest of our debt, particularly in this case where the reason that the guarantee is needed is because investors will demand it in order to protect themselves from legislative amendments by a future government. For that reason, it could be hard to justify, from a capital markets or cost perspective, having OPG borrowing in its own name with a government guarantee, so is it possible to revisit the potential accounting treatment and determine whether, now that we've effectively moved to a guaranteed structure, we could just have the Province, through the OFA or OEFC, do all of the borrowing and on-lend to OPG? Is this something that you'd been planning to address in the accounting material that you're sending over today?
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To: Gadi Mayman; Ken Kandeepan
Cc: Christina Zhang
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Date: Monday, February 27, 2017 2:29:29 PM

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Hi Ken, we all had to rush off to our next meetings following our meeting this morning, so we didn't get a chance to have a discussion about why a Provincial guarantee of all of OPG's debt related to the trust isn't a problem for the accounting treatment that we'd need to get to in order to make the GA smoothing plan work, while direct borrowing and on-lending from the Province would be, if it's greater than 49% of the total borrowing (actually 44% in your current model).

From a capital markets, investor and rating agency perspective, the guarantee is extremely likely to be lumped in with the rest of the Province's debt, and the guaranteed debt would be considered just as much of a provincial obligation as the rest of our debt, particularly in this case where the reason that the guarantee is needed is because investors will demand it in order to protect themselves from legislative amendments by a future government. For that reason, it could be hard to justify, from a capital markets or cost perspective, having OPG borrowing in its own name with a government guarantee, so is it possible to revisit the potential accounting treatment and determine whether, now that we've effectively moved to a guaranteed structure, we could just have the Province, through the OFA or OEFC, do all of the borrowing and on-lend to OPG? Is this something that you'd been planning to address in the accounting material that you're sending over today?

Thanks,
Gadi

From:	Gadi Mayman
To:	Mike Manning; Ken Kandeepan
Cc:	Christina Zhang; Ronald Kwan; Gavin He
Subject:	RE: Provincial Guarantee
Date:	Monday, February 27, 2017 2:34:12 PM

I agree with your perspective on this. The Newfoundland guarantee for the Churchill Falls dam is a good point that I'd forgotten about.

I'm copying Ron and Gavin, as they're preparing a slide for Energy on this.

Gadi

From: Mike Manning
Sent: Monday, February 27, 2017 2:29 PM
To: Gadi Mayman ; Ken Kandeepan
Cc: Christina Zhang
Subject: RE: Provincial Guarantee

Just a few random thoughts:

- I would think OPG borrowing with a guarantee is a game changer. As we've seen with Newfoundland, guarantees can be expensive, and I expect this one would be too, relative to Ontario's regular borrowing costs. If it is going on the Province's balance sheet, shouldn't that be done in the most efficient way. In addition, I'm surprised the Ontario borrowing and on-lending approach doesn't have more traction as it certainly provides more cost-savings potential, and this might definitely be required.
- I'm also unclear of the benefits of OPG direct borrowing, given that it appears to be direct government policy to me, and is anyone going to think otherwise? Again I don't have the full perspective and may be missing some of the rationale.

It would be great to discuss when you have the time.

Mike

From: Gadi Mayman
Sent: Monday, February 27, 2017 12:49 PM
To: Mike Manning <Mike.Manning@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Cc: Christina Zhang <Christina.Zhang@ofina.on.ca>
Subject: FW: Provincial Guarantee

Hi Mike,

Ken is familiar with what I'm asking about here, so either he or I could fill you in on more details if you'd like. The bottom line is that OPG has now determined, not surprisingly to me, that the debt that they issue to public markets for the GA smoothing option, would require a provincial guarantee. Not a full guarantee, they pointed out this morning, but just a guarantee that investors would be made whole, and have all of their costs covered, if a future government were to change the legislation under which this structure would be created. To me, that is pretty much equivalent to a full guarantee, as that's likely the only way the system fails, and investors would take on any risk.

My question is why that guarantee, and therefore the diminishment of risk to investors, is treated differently from an accounting perspective than the simpler process of us just borrowing and on-lending to them.
Please let me know if you have any questions, or would like to discuss this further.
Thanks,
Gadi

From: Gadi Mayman
Sent: Monday, February 27, 2017 12:45 PM
To: HARTWICK Ken -FINANCE <ken.hartwick@opg.com>
Cc: 'cindy.veinot@ontario.ca' <cindy.veinot@ontario.ca>
Subject: Provincial Guarantee

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Thanks,
Gadi

From:	Ronald Kwan
To:	Ken Kandeepan; Gadi Mayman; Mike Manning
Cc:	Gavin He; Anna Strathy
Subject:	RE: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 7:37:32 PM

Good point Ken.
I'd expect that this letter could be public (OPG posts certain correspondence from its Shareholder on its website). Perhaps Gadi could ask tomorrow if that would be the case with this letter.
Ron

From: Ken Kandeepan
Sent: April-12-17 19:20
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Cc: Gavin He ; Anna Strathy
Subject: RE: Rate Mitigation Implementation Meeting - April 13, 2017
Hi Gadi
One comment, Minister's memo to OPG, 4th para, first sentence should include the OFA among the entities listed.
Thanks
Ken K

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Cc: Gavin He <Gavin.He@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>
Subject: FW: Rate Mitigation Implementation Meeting - April 13, 2017

From: Katona, Keley (ENERGY) [mailto:Keley.Katona@ontario.ca]
Sent: Wednesday, April 12, 2017 5:33 PM
To: Steen Hume (CAB) <Steen.Hume@ontario.ca>; Kaili Sermat-Harding (ENERGY) <Kaili.Sermat-Harding@ontario.ca>; Michael Reid (ENERGY) <Michael.Reid@ontario.ca>; Carolyn Calwell (MCSS) <Carolyn.Calwell@ontario.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com) <jeffrey.lyash@opg.com>; HARTWICK Ken - FINANCE (ken.hartwick@opg.com) <ken.hartwick@opg.com>; Rosemaire Leclair <rosemarie.leclair@ontarioenergyboard.ca>; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca) <maryanne.aldred@ontarioenergyboard.ca>; Campbell, Bruce (bruce.campbell@ieso.ca) <bruce.campbell@ieso.ca>; Kim Marshall (Kim.Marshall@ieso.ca) <Kim.Marshall@ieso.ca>; Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Helen Angus (MOHLTC) <Helen.Angus@ontario.ca>; Steven Davidson (MTCS) <Steven.Davidson@ontario.ca>; 'Martine Band' <Martine.Band@ontarioenergyboard.ca>; 'CROZZOLI Carlo -CBUSDEV&STRT' <carlo.crozzoli@opg.com>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; LEE John -TREASURY <john.s.lee@opg.com>
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Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Good evening,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

From:	Ken Kandeepan
To:	Gadi Mayman; Ronald Kwan; Mike Manning
Cc:	Gavin He; Anna Strathy
Subject:	RE: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 7:20:26 PM

Hi Gadi

One comment, Minister's memo to OPG, 4th para, first sentence should include the OFA among the entities listed.

Thanks

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To:	"LEE John -TREASURY"; Scott Nelms (ENERGY); Mike Manning; Steen Hume (CAB)
Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY
Subject:	RE: Subcommittee - Equity Injection/OPG Share purchase
Date:	Thursday, March 09, 2017 1:50:47 PM

Hi John,

I'm cc'ing John Kim on this email chain, as he can be Clara Greco's contact on this from my team.

Thanks,

Ron

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]

Sent: March-09-17 13:29

To: Scott Nelms (ENERGY) ; Mike Manning ; Ronald Kwan ; Steen Hume (CAB)

Cc: CROZZOLI Carlo -CBUSDEV&STRT ; GRECO Clara -LAWDIV ; RYFA Ken -TREASURY ; HAHN PARKER Janet -TREASURY

Subject: Subcommittee - Equity Injection/OPG Share purchase

Steen/Mike/Ron:

Further to our call, can you identify a member from your team who can work with OPG (Clara Greco) on this joint initiative to establish a process to facilitate the equity injection requirements necessary to support the GA deferral financing.

Thanks

John

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From:	Ronald Kwan
To:	"LEE John -TREASURY"; Scott Nelms (ENERGY); Mike Manning; Steen Hume (CAB)
Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY
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From:	Mike Manning
To:	"LEE John -TREASURY"; Scott Nelms (ENERGY); Ronald Kwan; Steen Hume (CAB)
Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet - TREASURY; Carlos Yep; James Devine
Subject:	RE: Subcommittee - Equity Injection/OPG Share purchase
Date:	Thursday, March 09, 2017 4:41:56 PM

Hi John:
I've asked Carlos Yep to help out on this part of the project.
Thanks, Mike

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, March 09, 2017 1:29 PM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Mike Manning <Mike.Manning@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Steen Hume (CAB) <Steen.Hume@ontario.ca>
Cc: CROZZOLI Carlo -CBUSDEV&STRT <carlo.crozzoli@opg.com>; GRECO Clara -LAWDIV <clara.greco@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; HAHN PARKER Janet - TREASURY <j.hahnparker@opg.com>
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From: Thom, Trevor
To: Steen Hume (CAB); Hilary Cox (ENE)
Cc: Mike Manning; Scott Nelms (ENERGY)
Subject: RE: Today"s meeting
Date: Monday, April 03, 2017 10:56:13 AM

Done. Attending in person:

Trevor Thom - Government Finance
Susan Thompson - Government Finance
Mark Liang - Debt Capital Markets

Others will dial in. Thanks for providing a #.

-----Original Message-----
From: Hume, Steen (ENERGY) [mailto:Steen.Hume@ontario.ca]
Sent: Monday, April 03, 2017 10:49 AM
To: Thom, Trevor; Cox, Hilary (ENERGY)
Cc: Manning, Mike (OFA); Nelms, Scott (MOF)
Subject: Re: Today's meeting

Hi. Can you share the details with the TD.

Thanks

Sent from my iPad

On Apr 3, 2017, at 10:17 AM, Thom, Trevor <Trevor.Thom@tdsecurities.com<mailto:Trevor.Thom@tdsecurities.com>> wrote:

Can you please provide a dial-in/conference call details. 1-2 of us will attend in person, but other team members would like to dial in. Thx.

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com<mailto:trevor.thom@tdsecurities.com>

NOTICE: Confidential message which may be privileged. Unauthorized use/disclosure prohibited. If received in error, please go to www.td.com/legal<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.td.com_legal&d=DwIFAw&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=O1GzH72OKzSetU15LYROHQHFDXsT36NjKo6QjWZQyDk&s=WNO2wTMw_mMwwRaSOPadBcOXWDVFDM3IaZDv55wko5k&e= > for instructions.
AVIS : Message confidentiel dont le contenu peut être privilégié. Utilisation/divulgation interdites sans permission. Si reçu par erreur, prière d'aller au www.td.com/francais/avis_juridique<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.td.com_francais_avis-5Fjuridique&d=DwIFAw&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=O1GzH72OKzSetU15LYROHQHFDXsT36NjKo6QjWZQyDk&s=ui38opQEwHsgt0ApF92moMpii_75p_or10CfBdRz428&e= > pour des instructions.

From:	Mike Manning
To:	"ASHBOURNE, STEPHEN"; Scott Nelms (ENERGY)
Cc:	James Devine; Carlos Yep
Subject:	RE: Tomorrow"s meetings
Date:	Tuesday, March 28, 2017 3:34:02 PM

Hi Stephen:
I think your thoughts on the scope look fine. I suspect the dealers will have some useful input as well.
Mike

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Tuesday, March 28, 2017 10:22 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
Cc: James Devine <James.Devine@ofina.on.ca>; Carlos Yep <Carlos.Yep@ofina.on.ca>
Subject: RE: Tomorrow's meetings

Scott and Mike, here are some initial thoughts on the potential scope of the advisor role:
Advisor Role

- *Review the proposal to issue "AAA" asset-backed securities serviced by cash flows from legislatively-created receivables owing by present and future electricity customers in Ontario*
- *Identify key requirements that should be contemplated in the legislation that creates the receivables and provides for their sale, collection and enforcement*
- *Advise on alternative ways to structure the cash flows from the receivables in order to optimize funding alternatives under a flexible capital markets funding platform*
- *Provide input into the treasury funding model, including based on alternative capital market and rating agency scenarios (including commenting on OPG's specific funding proposals)*
- *Assess target capital markets based on the size and nature of the offerings and existing appetites for similar structured securities.*

I hope that's somewhat useful. Feel free to call if a discussion makes sense.
Regards, Steve
Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

Blakes
Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000, Toronto ON M5L 1A9
Tel: 416-863-2400 Fax: 416-863-2653

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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Tuesday, March 28, 2017 9:31 AM
To: Manning, Mike (OFA); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: RE: Tomorrow's meetings

No problem. That is better for me. Thanks for organizing.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: Tomorrow's meetings

Hi Guys:

Always challenging to arrange meetings, so will give you the current schedule which differs a bit from yesterday's:

- 11:00 Scotia
- 1:00 BMO
- 1:30 TD
- 2:00 Recap & selection

Sorry for the changes. I'm hoping that these times work for everyone. Let me know if thre is a problem.

Thanks, Mike

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From:	Nelms, Scott (MOF)
To:	ASHBOURNE, STEPHEN; Mike Manning
Cc:	James Devine; Carlos Yep
Subject:	RE: Tomorrow"s meetings
Date:	Tuesday, March 28, 2017 1:35:58 PM

Thanks Steve. This makes sense to me.

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: March 28, 2017 10:22 AM
To: Nelms, Scott (MOF); Manning, Mike (OFA)
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: RE: Tomorrow's meetings

Scott and Mike, here are some initial thoughts on the potential scope of the advisor role:

Advisor Role

- *Review the proposal to issue "AAA" asset-backed securities serviced by cash flows from legislatively-created receivables owing by present and future electricity customers in Ontario*
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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Tuesday, March 28, 2017 9:31 AM

To: Manning, Mike (OFA); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: RE: Tomorrow's meetings

No problem. That is better for me. Thanks for organizing.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: Tomorrow's meetings

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From:	ASHBOURNE, STEPHEN
To:	Scott Nelms (ENERGY); Mike Manning
Cc:	James Devine; Carlos Yep
Subject:	RE: Tomorrow"s meetings
Date:	Tuesday, March 28, 2017 10:21:42 AM

Scott and Mike, here are some initial thoughts on the potential scope of the advisor role:

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Regards, Steve

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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Tuesday, March 28, 2017 9:31 AM
To: Manning, Mike (OFA); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: RE: Tomorrow's meetings

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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM

To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: Tomorrow's meetings

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From:	Nelms, Scott (MOF)
To:	Mike Manning; ASHBOURNE, STEPHEN
Cc:	James Devine; Carlos Yep
Subject:	RE: Tomorrow"s meetings
Date:	Tuesday, March 28, 2017 9:31:09 AM

No problem. That is better for me. Thanks for organizing.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: Tomorrow's meetings

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From: ASHBOURNE, STEPHEN
To: Mike Manning
Subject: RE: Tomorrow"s meetings
Date: Tuesday, March 28, 2017 9:17:48 AM

No problem for me, Mike.

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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199 Bay Street, Suite 4000, Toronto ON M5L 1A9
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From: Nelms, Scott (MOF)
To: ASHBOURNE, STEPHEN; Mike Manning
Cc: James Devine; Carlos Yep
Subject: RE: Tomorrow"s meetings
Date: Wednesday, March 29, 2017 12:48:49 PM

Steve and I are back in your lobby.

Sent with BlackBerry Work (www.blackberry.com)

From: ASHBOURNE, STEPHEN <STEPHEN.ASHBOURNE@blakes.com<mailto:STEPHEN.ASHBOURNE@blakes.com>>
Date: Wednesday, Mar 29, 2017, 10:48 AM
To: Manning, Mike (OFA) <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Devine, James (OFA) <James.Devine@ofina.on.ca<mailto:James.Devine@ofina.on.ca>>, Yep, Carlos (OFA) <Carlos.Yep@ofina.on.ca<mailto:Carlos.Yep@ofina.on.ca>>
Subject: Re: Tomorrow's meetings

Hi. I'm in your lobby. Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>
Dir: 416-863-3086<tel:416-863-3086>

On Mar 28, 2017, at 3:34 PM, Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>> wrote:

Hi Stephen:
I think your thoughts on the scope look fine. I suspect the dealers will have some useful input as well.
Mike

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Tuesday, March 28, 2017 10:22 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>; Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>>
Cc: James Devine <James.Devine@ofina.on.ca<mailto:James.Devine@ofina.on.ca>>; Carlos Yep <Carlos.Yep@ofina.on.ca<mailto:Carlos.Yep@ofina.on.ca>>
Subject: RE: Tomorrow's meetings

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Regards, Steve
Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>
Dir: 416-863-3086

_____

<image001.gif>

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40&m=1H9hcuXHXemNr0y9vzf3f_uV4qZG7LKyzmmlHXyGnWM&s=WGf9j6jPy1E1C_vdq9RYq0_b5JNVZcKHyoF5MnLVLvI&e=>

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Sent: Tuesday, March 28, 2017 9:31 AM
To: Manning, Mike (OFA); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: RE: Tomorrow's meetings
No problem. That is better for me. Thanks for organizing.
From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
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From: ASHBOURNE, STEPHEN
To: Mike Manning; Scott Nelms (ENERGY)
Subject: RE: Wednesday meetings
Date: Monday, March 27, 2017 12:30:22 PM

Those times work well for me Mike, thanks. Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Monday, March 27, 2017 12:29 PM
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: Mike Manning
Subject: Wednesday meetings

Hi Guys:

I've arranged for 3 dealer meetings and a follow-up selection meeting as follows:

1:30 TD
2:00 Scotia
2:30 BMO
3:00 Selection Mtg

All meetings will be held at the OFA (1 Dundas Street West 14 th floor) in the Capital Markets Boardroom.

I look forward to seeing you both then. My number is 416 325 8930 and I will let you in when you arrive. Please let me know if these times work. The dealers are still confirming, so could have some changes. There is some flexibility if these times are problematic.

Mike

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From: Nelms, Scott (MOF)
To: ASHBOURNE, STEPHEN; Mike Manning
Subject: RE: Wednesday meetings
Date: Monday, March 27, 2017 1:06:48 PM

Works for me as well. Thanks Mike.

Sent with BlackBerry Work (www.blackberry.com)

From: ASHBOURNE, STEPHEN
<STEPHEN.ASHBOURNE@blakes.com<mailto:STEPHEN.ASHBOURNE@blakes.com>>
Date: Monday, Mar 27, 2017, 12:30 PM
To: Manning, Mike (OFA) <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>>, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Subject: RE: Wednesday meetings

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Stephen R. Ashbourne
Partner
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Dir: 416-863-3086

_____

[cid:image9a6cb8.GIF@d8f2014c.4d997936]

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From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Monday, March 27, 2017 12:29 PM
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: Mike Manning
Subject: Wednesday meetings

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From:	Nelms, Scott (MOF)
To:	Mike Manning; "ASHBOURNE, STEPHEN"
Subject:	RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date:	Friday, March 31, 2017 5:43:50 PM

Hi Mike,
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Sent: March 31, 2017 9:18 AM
To: Nelms, Scott (MOF); 'ASHBOURNE, STEPHEN'
Subject: RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
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mike

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Sent: Friday, March 31, 2017 9:16 AM
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To: Mike Manning <Mike.Manning@ofina.on.ca>
Subject: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Regards,
Trevor
Trevor Thom

Managing Director and Group Head, Government Finance | TD Securities
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P: (416) 982-2788 | C: (647) 262-8584
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From: ASHBOURNE, STEPHEN
To: Mike Manning; Scott Nelms (ENERGY)
Subject: RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date: Friday, March 31, 2017 3:10:39 PM

Mike, I am trying to pin down the timing of another meeting called on this matter for Tuesday. I think it is at 4ET but I will let you know once it's confirmed. Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com
Dir: 416-863-3086

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199 Bay Street, Suite 4000, Toronto ON M5L 1A9
Tel: 416-863-2400 Fax: 416-863-2653
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Blake, Cassels & Graydon LLP | Barristers & Solicitors | Patent & Trade-mark Agents
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From: Thom, Trevor
To: Mike Manning
Subject: RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date: Friday, March 31, 2017 12:12:54 PM

I have to head out shortly for the week.
Let me know once you hear back from the team.
Thx. Have a good weekend.

From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: Friday, March 31, 2017 9:30 AM
To: Thom, Trevor
Subject: RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Have gotten back to my colleagues. Waiting for response Will get back.
Mike

From: Thom, Trevor [mailto:Trevor.Thom@tdsecurities.com]
Sent: Friday, March 31, 2017 8:57 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>
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Date:	Friday, March 31, 2017 9:30:15 AM

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To:	Scott Nelms (ENERGY); "ASHBOURNE, STEPHEN"
Subject:	RE: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date:	Friday, March 31, 2017 9:17:38 AM

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mike

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Sent: Friday, March 31, 2017 9:16 AM
To: Mike Manning <Mike.Manning@ofina.on.ca>; 'ASHBOURNE, STEPHEN' <STEPHEN.ASHBOURNE@blakes.com>
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From: Gadi Mayman
To: Scott Nelms (ENERGY)
Cc: Mike Manning; Ronald Kwan; Ken Kandeepan
Subject: Re: EXTERNAL – Provincial Guarantee for Fair Hydro Program
Date: Tuesday, April 18, 2017 11:13:14 AM

Thanks. Has TD seen this, or commented on it? The make whole provision, rather than just moving the outstanding bonds up to being provincial debt could be extremely expensive if the guarantee is triggered and exercised.

I assume the challenge to the rating is that we're not AAA, so the debt would be downgraded to our level, but this shows the flaw in the ratings methodology, because why would you want a guarantee from someone who is supposedly less credit worthy? This is definitely, in my mind, worth pushing back on.

Regards,
Gadi

Original Message
From: Nelms, Scott (MOF)
Sent: Tuesday, April 18, 2017 11:04 AM
To: Gadi Mayman
Subject: FW: EXTERNAL – Provincial Guarantee for Fair Hydro Program

Fyi

-----Original Message-----

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]

Sent: April 16, 2017 6:28 PM

To: Hume, Steen (ENERGY); Nelms, Scott (MOF)

Cc: Calwell, Carolyn (ENERGY/MEDEI/MRI); WONG Leslie -LAWDIV

Subject: Fw: EXTERNAL – Provincial Guarantee for Fair Hydro Program

Steen/Scott

Here is the initial view of the dealers on their ask. We can discuss further tomorrow. Maybe more efficient that we discuss prior to the group meeting in the afternoon

John

From: Persaud, Donnie - Debt Capital Markets <Donnie.Persaud@cibc.com>

Sent: Thursday, April 13, 2017 9:15 PM

To: LEE John -TREASURY; RYFA Ken -TREASURY; WONG Leslie -LAWDIV

Cc: 'Sebastiano, Rocco'; 'Mullen, Max M.'; Maciel, Andrew; 'david.dalbello@rbccm.com'; 'Smith, Elliot'; 'Ms Victoria M. Turnbull'; Persaud, Donnie - Debt Capital Markets; 'Benaiah, Ian'; 'Fullerton, Rick'; Adalja, Sunil; Alvi, Shariq; Peric, Christiane

Subject: EXTERNAL – Provincial Guarantee for Fair Hydro Program

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Hey John, Ken,

Further to our discussion earlier today, please see the note below which outlines our collective views on the Provincial guarantee that would be required for the Fair Hydro Program. Happy to discuss further.

There are two types of “guarantees” that we are looking for from the Province in relation to this program on the basis that any debt issued under the Fair Hydro Program will be AAA-rated. In addition, the following is based on the understanding that the transition charges collected from prescribed consumers will begin upon the commencement of the program and will not be subject to any cap or restrictions.

The legislation must include a specific reference to the Province being required to provide a guarantee on debt repayment and servicing in certain circumstances.

The first is “Springing Guarantee”, which would be via a legal agreement put in place when establishing the program and would require the Province to step in and assume responsibility for paying all amounts that are or become due in respect of (i) any of the outstanding funding obligations; (ii) the operation and maintenance of the financing entity; and (iii) any other amounts due in relation to the program that have not yet been paid (collectively, the “Fair Hydro Program Costs”). This Springing Guarantee would kick in should any of the following happen:

(1) There is any change in the legislation or regulations that is, or could be, adverse to finance entity noteholders or the legislation is determined to be ultra vires. In this situation, the Springing Guarantee would require the immediate repayment of all Fair Hydro Program Costs (including any makewhole prepayment obligations).

(2) There is a market disruption (i.e. there is a period of time when capital markets term funding is not available to take out the warehouse facilities (bank facility or ABCP)). In this situation, either (i) we start to charge ratepayers for principal recovery via transition charges; or (ii) the Province must be responsible for the immediate repayment of those warehouse facilities.

The period of time that must lapse before this Springing Guarantee becomes applicable with respect to the warehouse facilities can be set to accommodate a short term dislocation in the term funding market (6-18 months). We would note that depending on the size of the warehouse facility, if there is no term takeout for an extended period of time, it is likely that the warehouse facilities will also quickly reach their credit limits and the province would likely have to fund any future shortfalls if they wished to continue the program.

To the extent that the Springing Guarantee does not require the Province to make the repayment contemplated under scenario (1), but simply requires the Province to repay the debt in accordance with its original repayment terms, this may adversely impact the rating of the Fair Hydro Program.

The second type of guarantee we are looking for from the province is a performance guarantee. This is not a credit guarantee. The performance guarantee would require the Province to stand behind certain obligations of the Servicer (initially IESO) in the program. This performance guarantee would be included as part of the Securitization documents for the program. It would, amongst other things, require the province to stand behind (including taking responsibility for helping remedy any breaches in) the representations, warranties, or covenants made by the servicer. It would also require the province to ensure that the servicer performs its servicing activities as set out in the securitization documents and if it does not, put in place an alternative servicer who would perform those servicing activities. The performance guarantee would also include standing behind any indemnities that may be owing by the servicer.

Donnie Persaud | Executive Director | Debt Capital Markets | CIBC Capital Markets | CIBC World Markets Inc.

161 Bay Street, 5th Floor, Toronto ON M5J 2S8 | Tel: 416-594-7511 | Fax: 416-594-7760 |
donnie.persaud@cibc.com<mailto:donnie.persaud@cibc.com>

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From: Gadi Mayman
To: Ken Kandeepan
Cc: Ronald Kwan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 11:53:40 PM

Hmmm. If I understand this chain correctly, and I'm likely missing something important, would we have a non-regulated entity making hundreds of millions of dollars a year that the ratepayers ultimately have to cover in the future? Or would it be OPG, not the trust, making that profit from the interest on their loan to the trust, and if it's OPG making the profit, can't the OEB weigh in? If either's the case, it would be kind of contrary to the very robust language the government has been using about the OEB providing ratepayer protection with privatized electrical utilities.

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> > >
> > > Thanks
> > >
> > > Ken k
> > >
> > > On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> > >
> > > > Hi,

I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.

But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.

Ron

On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
>
> On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> > Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of

expensing same it's capitalized.

As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.

Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.

The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware

of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi
Gadi

My
exchange
with
John,
as you
can see
little
short
on the
details.

Thanks

Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"

<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,

all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the
equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be

consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken
k

> On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that

equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get

cash
to
the
province.

John

-
-
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Original
Message-
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From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and
Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,

will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I
remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection

to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can
be
provided
is
if
OPG's
net
income
increases
by
an
amount
equal
to
the
increase
in
the
Province's
IOD
(
all
else
being
equal).
In

which
case
the
Province
will
be
fiscally
whole
upon
consolidation.

But
I
am
not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line,
or
at
least
that's
my
understanding.

As
such
the
potential
fiscal
impact
from
the

increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

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-
-
-
-
Original Message-
-
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-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
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-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,

Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-
-

Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment

Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-
-
-
-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as

soon
as
I
do.

Thanks

Ken
K

-
-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:

Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

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Original
Message-
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From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER
Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is

an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email
to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get

back
to
you
as
soon
as
I
hear
from
her.

Ken
K

-
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-
Original
Message-
-
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-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN
PARKER
Janet
-
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to

avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources

outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be
put
at
high
risk
under
the
proposed
scheme
due
to
the
proposed
quantum
of
lending
from
the
OEFC.
Our
accounting
group

along
with
Treasury
will
be
performing
some
further
assessment
on
this
but
it
may
be
worth
arranging
another
call
with
you
and
your
accounting
group
to
layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to

speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

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Power
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Ontario
Power
Generation
Inc.

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Ontario
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or
other
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strictly
prohibited.
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intended
recipient
and
have

received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

From: Ken Kandeepan
To: Ronald Kwan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:32:21 PM

No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.

Thanks

Ken k

On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi,
>
> I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
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Subject: RE:
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Please advise on

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A prompt response would be most appreciated,

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From: Ken Kandeepan
To: Ronald Kwan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:32:21 PM

No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.

Thanks

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From: Ronald Kwan
To: Gadi Mayman
Cc: Ken Kandeepan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:27:55 PM

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> > **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)"

<Nadine.Petsche@ontario.ca>, RYFA Ken - TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
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John

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[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15,
2017 5:51 PM

To: LEE John -TREASURY;
'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL –
RE: OEFC Funding of the
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Thanks

Ken k

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Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL –

RE: OEFC Funding of the
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Thank you. Will do.

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[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15,
2017 4:49 PM

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TREASURY

Cc: LEE John -TREASURY;
'Veinot, Cindy (TBS)'

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Subject: RE: EXTERNAL –
RE: OEFC Funding of the
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Thank you.

This is of utmost importance.
Please advise soonest.

Janet

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[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15,
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Cc: LEE John -TREASURY

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My apologies for the delay,
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Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

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Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

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We can make ourselves available for a call this morning. Please advise.

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Date: Wednesday, February 15, 2017 10:21:28 PM

First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.

On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

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> Thanks
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> >
> > Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at

any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

> **From:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> **Date:** February 15, 2017 at 6:36:48 PM EST
> **To:** LEE John -TREASURY <john.s.lee@opg.com>
> **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken -TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
> **Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral**
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On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:

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To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.

John

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact.

John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY

<john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you. Will do.

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Cindy is free now if you can set up the call.

Thanks

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From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 3:43 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

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From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

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Sent: Wednesday, February 15, 2017 1:57 PM

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Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 9:30 AM

To: LEE John -TREASURY

Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY

Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Ken K

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Sent: Wednesday, February 15, 2017 9:09 AM

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Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

Ken:

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We can make ourselves available for a call this morning. Please advise.

John

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Cc: Lynsey Wynberg; Ronald Kwan; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:21:28 PM

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Cc: Nadine Petsche (MOF)

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John

-----Original Message-----

From: Ken Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's

my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you. Will do.

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Cindy is free now if you can set up the call.

Thanks

Ken k

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Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

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From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

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Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

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From: Ken Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 9:30 AM

To: LEE John -TREASURY

Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY

Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

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From: LEE John -TREASURY
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Sent: Wednesday, February 15, 2017 9:09 AM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

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We can make ourselves available for a call this morning. Please advise.

John

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Inc.

From: Ken Kandeepan
To: Gadi Mayman
Cc: Lynsey Wynberg; Ronald Kwan; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:11:47 PM

Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.

As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.

Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.

The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.
>
> Gadi
>
> ---
>
> **From:** Ken Kandeepan
> **Sent:** Wednesday, February 15, 2017 9:19 PM
> **To:** Gadi Mayman
> **Cc:** Lynsey Wynberg
> **Subject:** Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
>
> Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

> **From:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> **Date:** February 15, 2017 at 6:36:48 PM EST
> **To:** LEE John -TREASURY <john.s.lee@opg.com>
> **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken -TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
> **Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral**
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> Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.
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> In which case upon consolidation there will be no fiscal impact to the Province.
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> As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.
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Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Thank you,

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416 592-6749

j.hahnparker@opg.com

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John

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From: Gadi Mayman
To: Ronald Kwan
Cc: Ken Kandeepan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:07:28 PM

It'd be a very interesting intellectual challenge if billions of dollars didn't rest on the outcome.

On Feb 15, 2017, at 9:58 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Gadi.
>
> I feel some sympathy for Scott N, and Cindy as they try to have viable options on the table, when it's such a challenging task.
>
> Ron
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To: LEE John -TREASURY

Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY

Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

*** Exercise caution. This is an EXTERNAL email. DO NOT open attachments or click links from unknown senders or unexpected email. ***

Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

-----Original Message-----

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]

Sent: Wednesday, February 15, 2017 9:09 AM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken - TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting entity.” I understanding from Alec Cheng (OPG accounting) who was on yesterday accounting call with Nadine (Controllers Office) that OPG GBE status would be put

at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.

We can make ourselves available for a call this morning. Please advise.

John

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_____

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me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

From: Gadi Mayman
To: Ronald Kwan
Cc: Ken Kandeepan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:07:28 PM

It'd be a very interesting intellectual challenge if billions of dollars didn't rest on the outcome.

On Feb 15, 2017, at 9:58 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Thanks Gadi.
>
> I feel some sympathy for Scott N, and Cindy as they try to have viable options on the table, when it's such a challenging task.
>
> Ron
>
> On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
>
> > Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
> >
> > Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.
> >
> > Gadi
> >
> > ---
> >
> > **From:** Ken Kandeepan
> > **Sent:** Wednesday, February 15, 2017 9:19 PM
> > **To:** Gadi Mayman
> > **Cc:** Lynsey Wynberg
> > **Subject:** Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
> >
> > Hi Gadi
> >
> > My exchange with John, as you can see little short on the details.
> >
> > Thanks
> >
> > Ken k
> >
> > Begin forwarded message:

From: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
Date: February 15, 2017 at 6:36:48 PM EST
To: LEE John -TREASURY <john.s.lee@opg.com>
Cc: "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken -TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

> On Feb 15, 2017, at 6:28 PM, LEE John -TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.
>
> John

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you. Will do.

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 4:49 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY; 'Veinot, Cindy

(TBS)'

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Cindy is free now if you can set up the call.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 3:43 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37

PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 1:57 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 9:30 AM

To: LEE John -TREASURY

Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY

Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

-----Original Message-----

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]

Sent: Wednesday, February 15, 2017 9:09 AM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken - TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting entity.” I understanding from Alec Cheng (OPG accounting) who was on yesterday accounting call with Nadine (Controllers Office) that OPG GBE status would be put

at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.

We can make ourselves available for a call this morning. Please advise.

John

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From: Ronald Kwan
To: Ken Kandeepan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:40:18 PM

And IESO gets the cost of debt from the OEB rate order, but doesn't actually pay interest, it sells at a discount to OPG and gets recovery of its cost from OPG on the sale plus the interest through the OEB process. But, happy to be corrected on that, as i don't have the deck in front of me and don't recall if that is explicit or. Was just my trying to read between the lines.

Ron

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> > >
> > > Thanks
> > >
> > > Ken k
> > >
> > > On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> > >
> > > > Hi,

I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.

But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.

Ron

On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
>
> On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> > Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of

expensing same it's capitalized.

As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.

Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.

The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware

of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi
Gadi

My
exchange
with
John,
as you
can see
little
short
on the
details.

Thanks

Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"

<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,

all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the
equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be

consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken
k

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> Ken:
>
> To clarify the expectation is that

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cash
to
the
province.

John

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and
Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,

will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I
remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection

to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can
be
provided
is
if
OPG's
net
income
increases
by
an
amount
equal
to
the
increase
in
the
Province's
IOD
(
all
else
being
equal).
In

which
case
the
Province
will
be
fiscally
whole
upon
consolidation.

But
I
am
not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line,
or
at
least
that's
my
understanding.

As
such
the
potential
fiscal
impact
from
the

increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

-
-
-
-
-
Original Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,

Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-
-

Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment

Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-
-
-
-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as

soon
as
I
do.

Thanks

Ken
K

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-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:

Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

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Original
Message-
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From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER
Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is

an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email
to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get

back
to
you
as
soon
as
I
hear
from
her.

Ken
K

-
-
-
-
-
Original
Message-
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-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN
PARKER
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TREASURY
<j.hahnparker@opg.com>

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RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

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avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources

outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be
put
at
high
risk
under
the
proposed
scheme
due
to
the
proposed
quantum
of
lending
from
the
OEFC.
Our
accounting
group

along
with
Treasury
will
be
performing
some
further
assessment
on
this
but
it
may
be
worth
arranging
another
call
with
you
and
your
accounting
group
to
layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to

speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

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message
from
your
system.
Ontario
Power
Generation
Inc.

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message,
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any
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to
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Ontario
Power
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From: Ronald Kwan
To: Gadi Mayman
Cc: Ken Kandeepan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 9:58:18 PM

Thanks Gadi.

I feel some sympathy for Scott N, and Cindy as they try to have viable options on the table, when it's such a challenging task.

Ron

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.
>
> Gadi
>
> ---
>
> **From:** Ken Kandeepan
> **Sent:** Wednesday, February 15, 2017 9:19 PM
> **To:** Gadi Mayman
> **Cc:** Lynsey Wynberg
> **Subject:** Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
>
> Hi Gadi
>
> My exchange with John, as you can see little short on the details.
>
> Thanks
>
> Ken k
>
> Begin forwarded message:
>
> > **From:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
> > **Date:** February 15, 2017 at 6:36:48 PM EST
> > **To:** LEE John -TREASURY <john.s.lee@opg.com>
> > **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken - TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL

<alec.cheng@opg.com>
Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

> On Feb 15, 2017, at 6:28 PM, LEE John -TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get cash to the province.
>
> John
>
> -----Original Message-----
>
> From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]
>
> Sent: Wednesday, February 15, 2017 5:51 PM
>
> To: LEE John -TREASURY; 'Veinot, Cindy (TBS)'
>
> Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you. Will do.

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 4:49 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY; 'Veinot, Cindy (TBS)'

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Cindy is free now if you can set up the call.

Thanks

Ken k

-----Original Message-----

From: HAHN PARKER Janet -TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 3:43 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

-----Original Message-----

From: Ken Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back from Cindy, will let you know as soon as I do.

Thanks

Ken K

-----Original Message-----

From: HAHN PARKER Janet -TREASURY
[mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15, 2017 1:57 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John -TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

-----Original Message-----

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 9:30 AM

To: LEE John -TREASURY

Cc: CHENG Alec -FIN & C CTRL; RYFA Ken -TREASURY; LIU Sheen -TREASURY; HAHN PARKER Janet -TREASURY

Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

*** Exercise caution. This is an EXTERNAL email. DO

NOT open attachments or click links from unknown senders or unexpected email. ***

Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

-----Original Message-----

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]

Sent: Wednesday, February 15, 2017 9:09 AM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; LIU Sheen -TREASURY <sheen.liu@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>

Subject: RE: OEFC Funding of the Global Adjustment Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations,

maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting entity." I understanding from Alec Cheng (OPG accounting) who was on yesterday accounting call with Nadine (Controllers Office) that OPG GBE status would be put at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to layout the issues since the Province seems to be driven by very tight and uncertain timelines and I want everyone to be up to speed.

We can make ourselves available for a call this morning. Please advise.

John

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<alec.cheng@opg.com>
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Cc: LEE John -TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Sent: Wednesday, February 15, 2017 4:49 PM

To: HAHN PARKER Janet -TREASURY

Cc: LEE John -TREASURY; 'Veinot, Cindy (TBS)'

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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From: Ronald Kwan
To: Ken Kandeepan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:40:18 PM

And IESO gets the cost of debt from the OEB rate order, but doesn't actually pay interest, it sells at a discount to OPG and gets recovery of its cost from OPG on the sale plus the interest through the OEB process. But, happy to be corrected on that, as i don't have the deck in front of me and don't recall if that is explicit or. Was just my trying to read between the lines.

Ron

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> > >
> > > Thanks
> > >
> > > Ken k
> > >
> > > On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> > >
> > > > Hi,

I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.

But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.

Ron

On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
>
> On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> > Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of

expensing same it's capitalized.

As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.

Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.

The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware

of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi
Gadi

My
exchange
with
John,
as you
can see
little
short
on the
details.

Thanks

Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"

<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,

all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the
equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be

consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken
k

> On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that

equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get

cash
to
the
province.

John

-
-
-
-
-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and
Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,

will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I
remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection

to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can
be
provided
is
if
OPG's
net
income
increases
by
an
amount
equal
to
the
increase
in
the
Province's
IOD
(
all
else
being
equal).
In

which
case
the
Province
will
be
fiscally
whole
upon
consolidation.

But
I
am
not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line,
or
at
least
that's
my
understanding.

As
such
the
potential
fiscal
impact
from
the

increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

-
-
-
-
-
Original Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
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-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,

Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-
-

Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment

Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-
-
-
-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as

soon
as
I
do.

Thanks

Ken
K

-
-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:

Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

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Original
Message-
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From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER
Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is

an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email
to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get

back
to
you
as
soon
as
I
hear
from
her.

Ken
K

-
-
-
-
-
Original
Message-
-
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-
-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN
PARKER
Janet
-
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to

avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources

outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be
put
at
high
risk
under
the
proposed
scheme
due
to
the
proposed
quantum
of
lending
from
the
OEFC.
Our
accounting
group

along
with
Treasury
will
be
performing
some
further
assessment
on
this
but
it
may
be
worth
arranging
another
call
with
you
and
your
accounting
group
to
layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to

speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

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or
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Ontario
Power
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Ontario
Power
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conversion
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hard
copy
or

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From: Ken Kandeepan
To: Ronald Kwan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:36:30 PM

That's my understanding as well.

Thanks

Ken k

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>
> Ron
>
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>
> > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> >
> > Thanks
> >
> > Ken k
> >
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> >
> > > Hi,
> > >
> > > I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> > >
> > > But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> > >
> > > Ron
> > >
> > > On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.

On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
>
> As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
>
> Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
>
> The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away,
> Ken.
>
> Gadi
>
> ---
>
> **From:** Ken Kandeepan

Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

From: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Date: February 15, 2017 at 6:36:48 PM EST
To: LEE John - TREASURY <john.s.lee@opg.com>

Cc: "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche

(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken -
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec -
FIN &
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â€“
RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thanks
John, it
seems
that
what
you are
saying
is
OPG's
net
income
will
increase,
all else
being
equal,
by the
amount
of the
interest
relating
to the
equity

injection.

In
which
case
upon
consolidation
there
will be
no
fiscal
impact
to the
Province.

As you
work
through
the
options
this
needs
to be
fleshed
out
since
the
Trust
will be
consolidated
with
OPG
we
need to
understand
how
OPG
will
show a
net
interest
income.

Thanks

Ken k

On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:

Ken:

To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province

and
this
would
cover
the
interest
expense
for
the
associated
debt
at
the
Province.
The
dividend
comment
was
meant
to
describe
mechanism
on
how
to
get
cash
to
the
province.

John

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and

Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,
will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I

remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection
to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can

be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the

Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

-
-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:

LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan

[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if

you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-

-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global

Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as
soon
as
I
do.

Thanks

Ken
K

-
-
-
-
-
Original
Message-

-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

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-

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Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER

Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is
an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick

response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken
K

-
-
-
-
-

Original
Message-
-
-
-
-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN

PARKER
Janet
-
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken:

Got
your
voice
message
with
respect
to
your
proposal
to
have
OEFC
fund
the
Global
Adjustment
deferral
indirectly
by
lending
to
OPG
and
having
OPG
subsequently

lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE,

we
must
be
able
to
“in
the
normal
course
of
its
operations,
maintain
its
operations
and
meet
its
liabilities
from
revenue
received
from
sources
outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE

status would be put at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to

layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to
speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

-
-
-

ONLY
INTENDED
FOR
THE
USE
OF
THE
INTENDED
RECIPIENT(S)
AND
MAY
CONTAIN
INFORMATION
THAT
IS
PRIVILEGED,
PROPRIETARY
AND/OR
CONFIDENTIAL.
If
you
are
not
the
intended
recipient,
you
are
hereby
notified
that
any
review,
retransmission,
dissemination,
distribution,
copying,
conversion
to
hard
copy
or
other
use
of
this
communication
is
strictly
prohibited.

If you are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

This message, including any attachments, is meant only for the

use
of
the
individual(s)
to
whom
it
is
intended
and
may
contain
information
that
is
privileged/confidential.
Any
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copying
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disclosure
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reply
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permanently
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this
message,
including
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attachments,
without
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all
copies.
Thank
you.

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Ontario
Power
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Ontario
Power
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Inc.

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system.
Ontario
Power
Generation
Inc.

From: Ken Kandeepan
To: Ronald Kwan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:36:30 PM

That's my understanding as well.

Thanks

Ken k

On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
>
> Ron
>
> On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> >
> > Thanks
> >
> > Ken k
> >
> > On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> >
> > > Hi,
> > >
> > > I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> > >
> > > But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> > >
> > > Ron
> > >
> > > On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.

On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
>
> As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
>
> Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
>
> The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away,
> Ken.
>
> Gadi
>
> ---
>
> **From:** Ken Kandeepan

Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

From: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Date: February 15, 2017 at 6:36:48 PM EST
To: LEE John - TREASURY <john.s.lee@opg.com>

Cc: "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche

(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken -
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec -
FIN &
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â€“
RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thanks
John, it
seems
that
what
you are
saying
is
OPG's
net
income
will
increase,
all else
being
equal,
by the
amount
of the
interest
relating
to the
equity

injection.

In
which
case
upon
consolidation
there
will be
no
fiscal
impact
to the
Province.

As you
work
through
the
options
this
needs
to be
fleshed
out
since
the
Trust
will be
consolidated
with
OPG
we
need to
understand
how
OPG
will
show a
net
interest
income.

Thanks

Ken k

On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:

Ken:

To clarify the expectation is that equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province

and
this
would
cover
the
interest
expense
for
the
associated
debt
at
the
Province.
The
dividend
comment
was
meant
to
describe
mechanism
on
how
to
get
cash
to
the
province.

John

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and

Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,
will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I

remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection
to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can

be provided is if OPG's net income increases by an amount equal to the increase in the Province's IOD (all else being equal). In which case the Province will be fiscally whole upon consolidation.

But I am not sure that going to happen since the

Trust will not contribute to OPG's bottom line, or at least that's my understanding.

As such the potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

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-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:

LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan

[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if

you
can
set
up
the
call.

Thanks

Ken
k

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-
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Original
Message-
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From:
HAHN
PARKER
Janet
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[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
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15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-

-
-
-
Original
Message-
-
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-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global

Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as
soon
as
I
do.

Thanks

Ken
K

-
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Original
Message-

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From:
HAHN
PARKER
Janet
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[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
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2017
1:57
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John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

-
-

-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER

Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is
an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick

response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken
K

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-
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-

Original
Message-
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From:
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John
-
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[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN

PARKER
Janet
-
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken:

Got
your
voice
message
with
respect
to
your
proposal
to
have
OEFC
fund
the
Global
Adjustment
deferral
indirectly
by
lending
to
OPG
and
having
OPG
subsequently

lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE,

we
must
be
able
to
“in
the
normal
course
of
its
operations,
maintain
its
operations
and
meet
its
liabilities
from
revenue
received
from
sources
outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE

status would be put at high risk under the proposed scheme due to the proposed quantum of lending from the OEFC. Our accounting group along with Treasury will be performing some further assessment on this but it may be worth arranging another call with you and your accounting group to

layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to
speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

-
-
-

ONLY
INTENDED
FOR
THE
USE
OF
THE
INTENDED
RECIPIENT(S)
AND
MAY
CONTAIN
INFORMATION
THAT
IS
PRIVILEGED,
PROPRIETARY
AND/OR
CONFIDENTIAL.
If
you
are
not
the
intended
recipient,
you
are
hereby
notified
that
any
review,
retransmission,
dissemination,
distribution,
copying,
conversion
to
hard
copy
or
other
use
of
this
communication
is
strictly
prohibited.

If you are not the intended recipient and have received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

This message, including any attachments, is meant only for the

use
of
the
individual(s)
to
whom
it
is
intended
and
may
contain
information
that
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error,
please
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immediately
by
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and
permanently
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this
message,
including
any
attachments,
without
reading
them,
and
destroy
all
copies.
Thank
you.

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Ontario
Power
Generation
Inc.

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Ontario
Power
Generation
Inc.

From: Ronald Kwan
To: Ken Kandeepan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:34:39 PM

Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.

Ron

On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> >
> > But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
> >
> > > First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.

On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
>
> As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
>
> Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
>
> The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.
>
> Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.
>
> Thanks
>
> Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> > Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
> >
> > Adding Ron and Mike so that all of us at the OFA are aware of

the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

---

Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

> **From:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
>
> **Date:** February 15, 2017 at 6:36:48 PM EST
> **To:** LEE John - TREASURY <john.s.lee@opg.com>
>
> **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken - TREASURY

<ken.ryfa@opg.com>,
CHENG Alec -FIN
& C CTRL
<alec.cheng@opg.com>

Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

On Feb 15, 2017, at 6:28

PM,
LEE
John -
TREASURY
<john.s.lee@opg.com>
wrote:

Ken:

To
clarify
the
expectation
is that
equity
injected
into
OPG
which
is on-
lend to
the
Trust
would
result
in net
interest
income
that
would
roll up
to the
Province
and
this
would
cover
the
interest
expense
for the
associated
debt at
the
Province.
The
dividend
comment
was

meant to describe mechanism on how to get cash to the province.

John

Original Message-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John - TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE:

EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be

an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount

equal
to the
increase
in the
Province's
IOD (
all else
being
equal).
In
which
case
the
Province
will be
fiscally
whole
upon
consolidation.

But I
am not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line, or
at least
that's
my
understanding.

As
such
the

potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

Original Message-

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15,

2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John -
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thank
you.
Will
do.

Original
Message-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet -
TREASURY

Cc:
LEE
John -
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Cindy
is free
now if
you
can set
up the
call.

Thanks

Ken k

Original
Message-

From:
HAHN
PARKER
Janet -
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
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John -
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

Original Message-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet - TREASURY

Cc: LEE John - TREASURY

Subject: RE:

EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

My
apologies
for the
delay,
unfortunately
I am
yet to
hear
back
from
Cindy,
will let
you
know
as soon
as I do.

Thanks

Ken K

Original
Message-

From:
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PARKER
Janet -
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Sent:
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1:57
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Kandeepan
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Cc:
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John -
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
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Deferral

Ken,

Please
advise
on this
call.
Timing
is
important.

A
prompt
response

would
be
most
appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

Original
Message-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
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9:30
AM

To:
LEE
John -
TREASURY

Cc:

CHENG
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C
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TREASURY;
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Janet -
TREASURY

Subject:
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– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

***
Exercise
caution.
This is
an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.

***

Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

-----Original Message-----

From:

LEE
John -
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[mailto:john.s.lee@opg.com]

Sent:
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-
TREASURY
<sheen.liu@opg.com>;
HAHN
PARKER
Janet -
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to

avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources outside of the government reporting

entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be put
at high
risk
under
the
proposed
scheme
due to
the
proposed
quantum
of
lending
from
the
OEFC.
Our
accounting
group
along
with
Treasury
will be
performing
some
further
assessment
on this

but it
may be
worth
arranging
another
call
with
you
and
your
accounting
group
to
layout
the
issues
since
the
Province
seems
to be
driven
by
very
tight
and
uncertain
timelines
and I
want
everyone
to be
up to
speed.

We
can
make
ourselves
available
for a
call
this
morning.
Please
advise.

John

THIS
MESSAGE
IS
ONLY
INTENDED
FOR
THE
USE
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THE
INTENDED
RECIPIENT(S)
AND
MAY
CONTAIN
INFORMATION
THAT
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PRIVILEGED,
PROPRIETARY
AND/OR
CONFIDENTIAL.
If you
are not
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intended
recipient,
you are
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notified
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retransmission,
dissemination,

distribution,
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this
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is
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If you
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have
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in
error,
please
notify
me by
return
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and
delete
this
message
from
your
system.
Ontario
Power
Generation
Inc.

This
message,

including
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is
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destroy
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Thank
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From: Ronald Kwan
To: Ken Kandeepan
Cc: Gadi Mayman; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:34:39 PM

Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.

Ron

On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi,
> >
> > I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.
> >
> > But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:
> >
> > > First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.

On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of expensing same it's capitalized.
>
> As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.
>
> Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.
>
> The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.
>
> Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.
>
> Thanks
>
> Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> > Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
> >
> > Adding Ron and Mike so that all of us at the OFA are aware of

the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

---

Hi Gadi

My exchange with John, as you can see little short on the details.

Thanks

Ken k

Begin forwarded message:

> **From:** Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>
>
> **Date:** February 15, 2017 at 6:36:48 PM EST
> **To:** LEE John - TREASURY <john.s.lee@opg.com>
>
> **Cc:** "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken - TREASURY

<ken.ryfa@opg.com>,
CHENG Alec -FIN
& C CTRL
<alec.cheng@opg.com>

Subject: Re: EXTERNAL â€“ RE: OEFC Funding of the Global Adjustment Deferral

Thanks John, it seems that what you are saying is OPG's net income will increase, all else being equal, by the amount of the interest relating to the equity injection.

In which case upon consolidation there will be no fiscal impact to the Province.

As you work through the options this needs to be fleshed out since the Trust will be consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken k

On Feb 15, 2017, at 6:28

PM,
LEE
John -
TREASURY
<john.s.lee@opg.com>
wrote:

Ken:

To
clarify
the
expectation
is that
equity
injected
into
OPG
which
is on-
lend to
the
Trust
would
result
in net
interest
income
that
would
roll up
to the
Province
and
this
would
cover
the
interest
expense
for the
associated
debt at
the
Province.
The
dividend
comment
was

meant to describe mechanism on how to get cash to the province.

John

Original Message-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John - TREASURY; 'Veinot, Cindy (TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE:

EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi John and Cindy

I just realized that in the event of an equity injection by the Province to OPG for a maximum of 49%, will as we discussed, have no impact on the Province's net debt.

Unfortunately there will be

an IOD impact. John, I remember you mentioning that OPG will increase the dividends it pays to the Province by an amount equivalent to the interest on the equity injection to date, however, that will only provide a cash and not a fiscal offset.

The only way a fiscal offset can be provided is if OPG's net income increases by an amount

equal
to the
increase
in the
Province's
IOD (
all else
being
equal).
In
which
case
the
Province
will be
fiscally
whole
upon
consolidation.

But I
am not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line, or
at least
that's
my
understanding.

As
such
the

potential fiscal impact from the increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken k

Original Message-

From: HAHN PARKER Janet - TREASURY [mailto:j.hahnparker@opg.com]

Sent: Wednesday, February 15,

2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John -
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thank
you.
Will
do.

Original
Message-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet -
TREASURY

Cc:
LEE
John -
TREASURY;
'Veinot,
Cindy
(TBS)'

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Cindy
is free
now if
you
can set
up the
call.

Thanks

Ken k

Original
Message-

From:
HAHN
PARKER
Janet -
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John -
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

Original Message-

From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet - TREASURY

Cc: LEE John - TREASURY

Subject: RE:

EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

My
apologies
for the
delay,
unfortunately
I am
yet to
hear
back
from
Cindy,
will let
you
know
as soon
as I do.

Thanks

Ken K

Original
Message-

From:
HAHN
PARKER
Janet -
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John -
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

Ken,

Please
advise
on this
call.
Timing
is
important.

A
prompt
response

would
be
most
appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

Original
Message-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John -
TREASURY

Cc:

CHENG
Alec -
FIN &
C
CTRL;
RYFA
Ken -
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER
Janet -
TREASURY

Subject:
EXTERNAL
– RE:
OEFC
Funding
of the
Global
Adjustment
Deferral

***
Exercise
caution.
This is
an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.

***

Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

-----Original Message-----

From:

LEE
John -
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec -
FIN &
C
CTRL
<alec.cheng@opg.com>;
RYFA
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TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
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<sheen.liu@opg.com>;
HAHN
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Janet -
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<j.hahnparker@opg.com>

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and I
want
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We
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this
morning.
Please
advise.

John

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To: Gadi Mayman
Cc: Ken Kandeepan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 10:33:27 PM

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>
> Adding Ron and Mike so that all of us at the OFA are aware of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.
>
> Gadi
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> **From:** Ken Kandeepan
> **Sent:** Wednesday, February 15, 2017 9:19 PM
> **To:** Gadi Mayman
> **Cc:** Lynsey Wynberg
> **Subject:** Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
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> Hi Gadi
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Thanks

Ken k

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Date: February 15, 2017 at 6:36:48 PM EST
To: LEE John -TREASURY <john.s.lee@opg.com>
Cc: "Veinot, Cindy (TBS)" <Cindy.Veinot@ontario.ca>, "Nadine Petsche (MOF)" <Nadine.Petsche@ontario.ca>, RYFA Ken -TREASURY <ken.ryfa@opg.com>, CHENG Alec -FIN & C CTRL <alec.cheng@opg.com>
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John

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From: Ken Kandeepan [mailto:Ken.Kandeepan@ofina.on.ca]

Sent: Wednesday, February 15, 2017 5:51 PM

To: LEE John - TREASURY; 'Veinot, Cindy

(TBS)'

Cc: Nadine Petsche (MOF)

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Ken k

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Sent: Wednesday, February 15, 2017 4:50 PM

To: Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>; 'Veinot, Cindy (TBS)' <Cindy.Veinot@ontario.ca>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you. Will do.

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Sent: Wednesday, February 15, 2017 4:49 PM

To: HAHN PARKER Janet -

TREASURY

Cc: LEE John - TREASURY; 'Veinot, Cindy (TBS)'

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Cindy is free now if you can set up the call.

Thanks

Ken k

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Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Thank you.

This is of utmost importance. Please advise soonest.

Janet

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Sent: Wednesday, February 15, 2017 3:37 PM

To: HAHN PARKER Janet - TREASURY

Cc: LEE John - TREASURY

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

My apologies for the delay, unfortunately I am yet to hear back

from Cindy, will let
you know as soon
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Thanks

Ken K

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Sent: Wednesday,
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1:57 PM

To: Ken
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<Ken.Kandeepan@ofina.on.ca>

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<john.s.lee@opg.com>

Subject: RE:
EXTERNAL – RE:
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Ken,

Please advise on
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A prompt response would be most appreciated,

Thank you,

Janet Hahn Parker

416 592-6749

j.hahnparker@opg.com

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Subject: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

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Thanks John for the quick response, I have forwarded your email to Cindy, since her presence and/or Nadine's is essential if we are having a conference call, will get back to you as soon as I hear from her.

Ken K

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We can make ourselves available for a call this morning. Please advise.

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From: Gadi Mayman
To: Ken Kandeepan
Cc: Ronald Kwan; Lynsey Wynberg; Mike Manning; Gavin He
Subject: Re: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral
Date: Wednesday, February 15, 2017 11:53:40 PM

Hmmm. If I understand this chain correctly, and I'm likely missing something important, would we have a non-regulated entity making hundreds of millions of dollars a year that the ratepayers ultimately have to cover in the future? Or would it be OPG, not the trust, making that profit from the interest on their loan to the trust, and if it's OPG making the profit, can't the OEB weigh in? If either's the case, it would be kind of contrary to the very robust language the government has been using about the OEB providing ratepayer protection with privatized electrical utilities.

On Feb 15, 2017, at 10:36 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:

> That's my understanding as well.
>
> Thanks
>
> Ken k
>
> On Feb 15, 2017, at 10:34 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
>
> > Hi. Ken, emails crossed. I agree, but it would mean OPG is not being regulated by the OEB on this.
> >
> > Ron
> >
> > On Feb 15, 2017, at 10:32 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
> >
> > > No, I was informed by OPCD that IESO will set up the reg asset as you point out but will promptly sell same to the Trust. So the expectation is that at the end of each fiscal year the reg asset set up in that year would be sold to the OPG Trust.
> > >
> > > Thanks
> > >
> > > Ken k
> > >
> > > On Feb 15, 2017, at 10:27 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:
> > >
> > > > Hi,

I may be wrong on this, so correct me if so, as I have not been at the accounting meetings on this structure.

But, based on the Energy submission, I took it as IESO would have the regulatory asset. As such, I took it that the Trust would be outside of OPG's OEB regulated entity.

Ron

On Feb 15, 2017, at 10:21 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> First getting it past their auditors will be a challenge, as you've said, and secondly getting the OEB to accept that OPG should be earning the extra $750 million per year that we'd need at the peak of the debt accumulation will be even more challenging. It would have to be a hit to ratepayers. That would be even harder to explain than a hit to them from an ROE to the Province, which, as you've seen, I've had trouble wrapping my mind around in earlier emails.
>
> On Feb 15, 2017, at 10:11 PM, Ken Kandeepan <Ken.Kandeepan@ofina.on.ca> wrote:
>
> > Not entirely, though the underlying concept is similar. This is just logical speculation on my part but what John is probably driving at is the Trust pays OPG the interest but instead of

expensing same it's capitalized.

As such when the Trust is consolidated with OPG the interest income remains in OPG's books since there is no expense to offset it in the books of the Trust.

Ergo, OPG has a net interest income which all else being equal increases its net income, which in turn when consolidated with Province, provides the required fiscal offset to the increase in the Province's IOD.

The problem here would be how willing OPG's auditors will be in recognizing an interest income on OPG books that will be paid in about 15 years time and that too on a piecemeal basis.

Having said all of this let me repeat I may be quite mistaken and John may have a more feasible solution in mind.

Thanks

Ken k

On Feb 15, 2017, at 9:36 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

> Sounds to me that they're going where Scott Nelms alluded to in his email with an ROE for the Province that would offset our borrowing cost?
>
> Adding Ron and Mike so that all of us at the OFA are aware

of the same facts, as this is moving quickly, and any of us may be asked at any time about it, including on Friday when you and I are away, Ken.

Gadi

From: Ken Kandeepan
Sent: Wednesday, February 15, 2017 9:19 PM
To: Gadi Mayman
Cc: Lynsey Wynberg
Subject: Fwd: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Hi
Gadi

My
exchange
with
John,
as you
can see
little
short
on the
details.

Thanks

Ken k

Begin
forwarded
message:

From:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Date:
February
15,
2017
at
6:36:48
PM
EST

To:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Cc:
"Veinot,
Cindy
(TBS)"

<Cindy.Veinot@ontario.ca>,
"Nadine
Petsche
(MOF)"
<Nadine.Petsche@ontario.ca>,
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>,
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>

Subject:
Re:
EXTERNAL
â
€“
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thanks
John,
it
seems
that
what
you
are
saying
is
OPG's
net
income
will
increase,

all
else
being
equal,
by
the
amount
of
the
interest
relating
to
the
equity
injection.

In
which
case
upon
consolidation
there
will
be
no
fiscal
impact
to
the
Province.

As
you
work
through
the
options
this
needs
to
be
fleshed
out
since
the
Trust
will
be

consolidated with OPG we need to understand how OPG will show a net interest income.

Thanks

Ken
k

> On Feb 15, 2017, at 6:28 PM, LEE John - TREASURY <john.s.lee@opg.com> wrote:
>
> Ken:
>
> To clarify the expectation is that

equity injected into OPG which is on-lend to the Trust would result in net interest income that would roll up to the Province and this would cover the interest expense for the associated debt at the Province. The dividend comment was meant to describe mechanism on how to get

cash
to
the
province.

John

-
-
-
-
-
Original
Message-
-
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-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
5:51
PM

To:
LEE
John
-
TREASURY;
'Veinot,
Cindy
(TBS)'

Cc:
Nadine
Petsche
(MOF)

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Hi
John
and
Cindy

I
just
realized
that
in
the
event
of
an
equity
injection
by
the
Province
to
OPG
for
a
maximum
of
49%,

will
as
we
discussed,
have
no
impact
on
the
Province's
net
debt.

Unfortunately
there
will
be
an
IOD
impact.
John,
I
remember
you
mentioning
that
OPG
will
increase
the
dividends
it
pays
to
the
Province
by
an
amount
equivalent
to
the
interest
on
the
equity
injection

to
date,
however,
that
will
only
provide
a
cash
and
not
a
fiscal
offset.

The
only
way
a
fiscal
offset
can
be
provided
is
if
OPG's
net
income
increases
by
an
amount
equal
to
the
increase
in
the
Province's
IOD
(
all
else
being
equal).
In

which
case
the
Province
will
be
fiscally
whole
upon
consolidation.

But
I
am
not
sure
that
going
to
happen
since
the
Trust
will
not
contribute
to
OPG's
bottom
line,
or
at
least
that's
my
understanding.

As
such
the
potential
fiscal
impact
from
the

increased IOD may be an issue for the Province re this option. In any event I will check with Gadi and circle back.

Thanks

Ken
k

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-
-
-
-
Original Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
4:50
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>;
'Veinot,
Cindy
(TBS)'
<Cindy.Veinot@ontario.ca>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Thank
you.
Will
do.

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
4:49
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY;
'Veinot,

Cindy
(TBS)'

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Cindy
is
free
now
if
you
can
set
up
the
call.

Thanks

Ken
k

-
-
-
-
-

Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
3:43
PM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
LEE
John
-
TREASURY
<john.s.lee@opg.com>

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment

Deferral

Thank
you.

This
is
of
utmost
importance.
Please
advise
soonest.

Janet

-
-
-
-
-
Original
Message-
-
-
-
-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
3:37
PM

To:
HAHN
PARKER
Janet
-
TREASURY

Cc:
LEE
John
-
TREASURY

Subject:
RE:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

My
apologies
for
the
delay,
unfortunately
I
am
yet
to
hear
back
from
Cindy,
will
let
you
know
as

soon
as
I
do.

Thanks

Ken
K

-
-
-
-
-
Original
Message-
-
-
-
-

From:
HAHN
PARKER
Janet
-
TREASURY
[mailto:j.hahnparker@opg.com]

Sent:
Wednesday,
February
15,
2017
1:57
PM

To:

Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>

Cc: LEE John - TREASURY <john.s.lee@opg.com>

Subject: RE: EXTERNAL – RE: OEFC Funding of the Global Adjustment Deferral

Ken,

Please advise on this call. Timing is important.

A prompt response would be most appreciated,

Thank
you,

Janet
Hahn
Parker

416
592-
6749

j.hahnparker@opg.com

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-
-
Original
Message-
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-

From:
Ken
Kandeepan
[mailto:Ken.Kandeepan@ofina.on.ca]

Sent:
Wednesday,
February
15,
2017
9:30
AM

To:
LEE
John
-
TREASURY

Cc:
CHENG
Alec
-
FIN
&
C
CTRL;
RYFA
Ken
-
TREASURY;
LIU
Sheen
-
TREASURY;
HAHN
PARKER
Janet
-
TREASURY

Subject:
EXTERNAL
–
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

***
Exercise
caution.
This
is

an
EXTERNAL
email.
DO
NOT
open
attachments
or
click
links
from
unknown
senders
or
unexpected
email.
***

Thanks
John
for
the
quick
response,
I
have
forwarded
your
email
to
Cindy,
since
her
presence
and/or
Nadine's
is
essential
if
we
are
having
a
conference
call,
will
get

back
to
you
as
soon
as
I
hear
from
her.

Ken
K

-
-
-
-
-
Original
Message-
-
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-

From:
LEE
John
-
TREASURY
[mailto:john.s.lee@opg.com]

Sent:
Wednesday,
February
15,
2017
9:09
AM

To:
Ken
Kandeepan
<Ken.Kandeepan@ofina.on.ca>

Cc:
CHENG
Alec
-
FIN
&
C
CTRL
<alec.cheng@opg.com>;
RYFA
Ken
-
TREASURY
<ken.ryfa@opg.com>;
LIU
Sheen
-
TREASURY
<sheen.liu@opg.com>;
HAHN
PARKER
Janet
-
TREASURY
<j.hahnparker@opg.com>

Subject:
RE:
OEFC
Funding
of
the
Global
Adjustment
Deferral

Ken:

Got your voice message with respect to your proposal to have OEFC fund the Global Adjustment deferral indirectly by lending to OPG and having OPG subsequently lend to a Financing Trust. I agree that this would be the simplest funding mechanism. However since the key objective for the Province to

avoid having to recognize the debt and writeoff the Global Adjustment deferral OPG must maintain Government Business Entity (GBE) status. In order to remain a GBE, we must be able to “in the normal course of its operations, maintain its operations and meet its liabilities from revenue received from sources

outside
of
the
government
reporting
entity.”
I
understanding
from
Alec
Cheng
(OPG
accounting)
who
was
on
yesterday
accounting
call
with
Nadine
(Controllers
Office)
that
OPG
GBE
status
would
be
put
at
high
risk
under
the
proposed
scheme
due
to
the
proposed
quantum
of
lending
from
the
OEFC.
Our
accounting
group

along
with
Treasury
will
be
performing
some
further
assessment
on
this
but
it
may
be
worth
arranging
another
call
with
you
and
your
accounting
group
to
layout
the
issues
since
the
Province
seems
to
be
driven
by
very
tight
and
uncertain
timelines
and
I
want
everyone
to
be
up
to

speed.

We
can
make
ourselves
available
for
a
call
this
morning.
Please
advise.

John

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Power
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Ontario
Power
Generation
Inc.

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Ontario
Power
Generation
Inc.

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or

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conversion
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or
other
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communication
is
strictly
prohibited.
If
you
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the
intended
recipient
and
have

received this message in error, please notify me by return e-mail and delete this message from your system. Ontario Power Generation Inc.

From: Gadi Mayman
To: Scott Nelms (ENERGY)
Cc: Nancy Kennedy (MOHLTC); Mike Manning
Subject: Re: Financial Advisor
Date: Friday, March 24, 2017 10:25:32 AM

TD did the Muskrat Falls deal, and structured it in what, at the time, was the most cost-effective way of doing it, but I don't think there was any legislation involved so it didn't have the same complexities. I don't know if there's a particularly big difference between any of the six banks, and they'll all likely push for the most iron clad guarantee that we're able to give, so maybe my idea isn't a great one on reflection, and we should fall back on a Blair Franklin type. Mike, any thoughts?

In the end, it's really about what the accountants say is acceptable or not, so I'm not sure having a second opinion from a financial advisor is of as much value as a second opinion on the direction that E&Y is giving OPG.

Original Message
From: Nelms, Scott (MOF)
Sent: Friday, March 24, 2017 9:55 AM
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC); Mike Manning
Subject: RE: Financial Advisor

Serge talked to Alan yesterday, and apparently Alan feels he is conflicted given his ongoing involvement with OPG. I will float the idea of going to the other banks, as a check. Is there one of the 4 that has a particularly strong team?

-----Original Message-----
From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: March 24, 2017 9:34 AM
To: Nelms, Scott (MOF)
Cc: Kennedy, Nancy (MOF); Manning, Mike (OFA)
Subject: Re: Financial Advisor

I'm not sure how much value added that any of these boutiques would provide. The people that know the markets are the investment bankers that are actually going to be part of the syndicate that will have to market, sell and trade these bonds. Why not have one of TD, Scotia, National or BMO provide this double-checking? If we're worried about the conflict that they are going to give advice that will make it easier to sell the bonds to ultimately make their life as syndicate members easier, then I can see the potential attraction of an advisor that isn't in that business, but why can't Alan be that guy? I don't see that any of those that you've named would provide better external advice to the Province than he would, unless we're concerned that he's too embedded with OPG, but I don't think so.

As for the names you've mentioned, Hansel, if that turns out to be the third one, is run by a lawyer which might be helpful, but I don't know if they know much about bonds, maybe that's where Bill Gula comes in, Blair Franklin definitely knows bonds, as Fred Mifflin used to be head of government Finance at BMO many years ago and they advised the Feds on Muskrat Falls, and I haven't heard of Origin.

I've added Mike, because he knows way more about the bond market and what investors will want than anyone we've talked about in this exchange, so he may have some ideas as to where the Province should go for external advice.

Hope that helps.

Gadi
Original Message
From: Nelms, Scott (MOF)
Sent: Friday, March 24, 2017 8:45 AM
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor

Hi Gadi,

Energy and Blakes suggest that the Province needs its own financial advisor to test what we are hearing from OPG. As I understand it, there are some elements that OPG believes are requirements in the legislation. The Province would like someone with a market perspective (in addition to your team) that can test the need for each of those requirements as they arise. Given timing, they need someone who can be available in real time to provide this advice.

I will circle back as to whether that is Hansell and not Hanslep. Let me know if there are other names that you might suggest.

Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
Subject: Re: Financial Advisor

Hi Scott, what is it that we're looking for from a financial advisor? Is this to help with the structuring of OPG Trust's debt issuance? I know Blair Franklin, and they advised Canada on Muskrat Falls. I'm not familiar with Origin, and I don't know Bill Gula, but is that Hansell LLP, not Hanslep?

In any case, I'm not sure what any of them bring to the table beyond what the three banks already engaged would provide, with Alan and the OFA weighing in when their inevitable conflicts get in the way?

I'd be happy to discuss further to get more colour on what you're looking for.

Gadi

Original Message
From: Nelms, Scott (MOF)
Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

Hi Gadi,

Have you had any dealings with the financial folks listed below? If so any thoughts?

Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blackberry.com&d=DwIF_g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=3CXvpkRBdXO8bo6dIvXPkZDYa_kYL1UPZc_YCOdjLsg&s=QjbgTIleYB-TAsaUYgd3FdIujgwRRK1DPI5zTAO82fU&e= >)

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

I spoke with Alan Hibben. He's fully engaged on the file with OPG. He suggested three other firms/people -- Origin Financial, Blair Franklin, and Bill Gula (Hanslep LLP). Carolyn, suggest you chat with Judy if Blakes has worked with any of the above. Scott, you could talk to Gadi etc if he has some thoughts on the above as well.

Let's group after your chats.
Serge

Sent from my iPad

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From: Gadi Mayman
To: Scott Nelms (ENERGY)
Cc: Nancy Kennedy (MOHLTC); Mike Manning
Subject: Re: Financial Advisor
Date: Friday, March 24, 2017 9:34:11 AM

I'm not sure how much value added that any of these boutiques would provide. The people that know the markets are the investment bankers that are actually going to be part of the syndicate that will have to market, sell and trade these bonds. Why not have one of TD, Scotia, National or BMO provide this double-checking? If we're worried about the conflict that they are going to give advice that will make it easier to sell the bonds to ultimately make their life as syndicate members easier, then I can see the potential attraction of an advisor that isn't in that business, but why can't Alan be that guy? I don't see that any of those that you've named would provide better external advice to the Province than he would, unless we're concerned that he's too embedded with OPG, but I don't think so.

As for the names you've mentioned, Hansel, if that turns out to be the third one, is run by a lawyer which might be helpful, but I don't know if they know much about bonds, maybe that's where Bill Gula comes in, Blair Franklin definitely knows bonds, as Fred Mifflin used to be head of government Finance at BMO many years ago and they advised the Feds on Muskrat Falls, and I haven't heard of Origin.

I've added Mike, because he knows way more about the bond market and what investors will want than anyone we've talked about in this exchange, so he may have some ideas as to where the Province should go for external advice.

Hope that helps.

Gadi
Original Message
From: Nelms, Scott (MOF)
Sent: Friday, March 24, 2017 8:45 AM
To: Gadi Mayman
Cc: Nancy Kennedy (MOHLTC)
Subject: RE: Financial Advisor

Hi Gadi,

Energy and Blakes suggest that the Province needs its own financial advisor to test what we are hearing from OPG. As I understand it, there are some elements that OPG believes are requirements in the legislation. The Province would like someone with a market perspective (in addition to your team) that can test the need for each of those requirements as they arise. Given timing, they need someone who can be available in real time to provide this advice.

I will circle back as to whether that is Hansell and not Hanslep. Let me know if there are other names that you might suggest.

Scott

Sent with BlackBerry Work (www.blackberry.com)

From: Gadi Mayman <Gadi.Mayman@ofina.on.ca<mailto:Gadi.Mayman@ofina.on.ca>>
Date: Thursday, Mar 23, 2017, 5:57 PM
To: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>
Cc: Kennedy, Nancy (MOF) <Nancy.Kennedy@ontario.ca<mailto:Nancy.Kennedy@ontario.ca>>
Subject: Re: Financial Advisor

Hi Scott, what is it that we're looking for from a financial advisor? Is this to help with the structuring of OPG Trust's debt issuance? I know Blair Franklin, and they advised Canada on Muskrat Falls. I'm not familiar with Origin, and I don't know Bill Gula, but is that Hansell LLP, not Hanslep?

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I'd be happy to discuss further to get more colour on what you're looking for.

Gadi

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Sent: Thursday, March 23, 2017 2:26 PM
To: Gadi Mayman
Subject: FW: Financial Advisor

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Thanks,
Scott

Sent with BlackBerry Work (www.blackberry.com<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blackberry.com&d=DwIF_g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=3CXvpkRBdXO8bo6dIvXPkZDYa_kYL1UPZc_YCOdjLsg&s=QjbgTIleYB-TAsaUYgd3FdIujgwRRK1DPI5zTAO82fU&e= >)

From: Imbrogno, Serge (ENERGY) <Serge.Imbrogno@ontario.ca<mailto:Serge.Imbrogno@ontario.ca>>
Date: Thursday, Mar 23, 2017, 1:13 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI) <Carolyn.Calwell@ontario.ca<mailto:Carolyn.Calwell@ontario.ca>>
Cc: Nelms, Scott (MOF) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>, Katona, Keley (ENERGY) <Keley.Katona@ontario.ca<mailto:Keley.Katona@ontario.ca>>
Subject: Financial Advisor

Hi,

I spoke with Alan Hibben. He's fully engaged on the file with OPG. He suggested three other firms/people -- Origin Financial, Blair Franklin, and Bill Gula (Hanslep LLP). Carolyn, suggest you chat with Judy if Blakes has worked with any of the above. Scott, you could talk to Gadi etc if he has some thoughts on the above as well.
Let's group after your chats.
Serge

Sent from my iPad

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From: ASHBOURNE, STEPHEN
To: Mike Manning
Cc: Scott Nelms (ENERGY)
Subject: Re: Financial Advisor
Date: Thursday, March 30, 2017 9:21:19 AM

Mike, thanks for the update. This is not really surprising. A couple of thoughts. First, they should not overstate the amount of work - I think it will mostly be at the front-end, commenting on the legislation. Second, they may be realizing there's a possibility of becoming cross-threaded with OPG through the advisor role, leading to a lesser allocation in the future OPG syndicate. I think you might be able to reassure them this should be collaborative and that while the Province is looking for an independent view, TD should not be put into an anti-OPG spot through our process. Happy to discuss further if useful. Regards, Steve

Stephen R. Ashbourne

Partner

stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>

Dir: 416-863-3086<tel:416-863-3086>

On Mar 30, 2017, at 8:46 AM, Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>> wrote:

Hi Guys:

I didn’t get back to the three dealers yesterday but was planning to do it first thing this morning,. TD sent me an email early this morning expressing some concern over compensation. This boils down to their expected role in future OPG syndicates, and I think that they recognized that this is a bigger resource commitment than they first thought based on our meeting yesterday. I cannot give them an guaranteed syndicate allocation. I explained that to Trevor and he will come back to me shortly based on his conversation with the senior TD team. Thoughts appreciated and I will get back to you shortly.

Mike

_____

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_____

[cid:imagea5306d.GIF@aa758056.4ba01264]

Blake, Cassels & Graydon LLP

199 Bay Street, Suite 4000, Toronto ON M5L 1A9

Tel: 416-863-2400 Fax: 416-863-2653

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From:	Gadi Mayman
To:	Ronald Kwan; Ken Kandeepan; Mike Manning
Cc:	Anna Strathy; Gavin He
Subject:	Re: GA Financing Response to Minister"s Request
Date:	Tuesday, April 18, 2017 10:53:43 AM

I didn't. I'll ask Serge and Steen for a copy.

From: Ronald Kwan
Sent: Tuesday, April 18, 2017 10:44 AM
To: Gadi Mayman; Ken Kandeepan; Mike Manning
Cc: Anna Strathy; Gavin He
Subject: RE: GA Financing Response to Minister's Request

Hi Gadi,
Did we get the final copy of the Energy letter to OPG?
Ron

From: Gadi Mayman
Sent: April-18-17 9:36 AM
To: Ronald Kwan ; Ken Kandeepan ; Mike Manning
Cc: Anna Strathy ; Gavin He
Subject: Fw: GA Financing Response to Minister's Request
The OFA isn't mentioned in the body of the letter, but given that I'm cc'd with a pretty esteemed list, I'll take that as sufficient.

From: LORD Bernard -BOARDCHAIR <bernard.lord@opg.com>
Sent: Tuesday, April 18, 2017 9:10 AM
To: 'glenn.thibeault@ontario.ca'
Cc: Charles Sousa (MOF); Scott Thompson (CAB); Serge Imbrogno (ENERGY); Gadi Mayman; LYASH Jeffrey - PRESIDENT; HARTWICK Ken -FINANCE; GINTHER Chris -CAO; KING Catriona -OFFCORPSEC; MATHIAS Carlton -OFFCORPSEC
Subject: GA Financing Response to Minister's Request
Hello,
Please see the attached letter from Bernard Lord, Board Chair Ontario Power Generation.
Thanks,
Rosemarie

Rosemarie Hoilett
Executive Assistant - Jeff Lyash President & CEO | Bernard Lord Board Chair
Ontario Power Generation
700 University Ave | H19-A24
Toronto ON M5G 1X6
416-592-2114 | rosemarie.hoilett@opg.com

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Thanks,
Rosemarie

Rosemarie Hoilett
Executive Assistant - Jeff Lyash President & CEO | Bernard Lord Board Chair
Ontario Power Generation
700 University Ave | H19-A24
Toronto ON M5G 1X6
416-592-2114 | rosemarie.hoilett@opg.com

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From:	Gadi Mayman
To:	Malle Hanslep (MOF); Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Michael Waterston (MOF)
Subject:	Re: Guarantee
Date:	Saturday, April 22, 2017 10:40:50 AM

That approach makes sense to me.

Thanks,
Gadi

From: Hanslep, Malle (MOF)
Sent: Saturday, April 22, 2017 10:32 AM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: RE: Guarantee

Hi Gadi,
I was thinking about the approach further and I think it would be best if I write to Len Hatzis (legal director at TBS) and Carolyn (so she is aware) first to let Len know the background that the DM of TBS is in favour of the Minister of Finance signing any required guarantee (although maybe he is well aware of this already) and also MOF/OFA view that we shouldn't exempt generally transactions under the new proposed Act from s. 28.
Then Len can let me know which TBS counsel are working on it as I think that it may be Nick and Paul but don't know for sure and don't know what their involvement on this file has been and I don't think I should send the email to TBS without letting Carolyn know.
]Malle

From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: April-21-17 8:07 PM
To: Hanslep, Malle (MOF); Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Waterston, Michael (MOF)
Subject: Re: Guarantee
Thanks, Malle, if you wouldn't mind sharing it with Nick or Paul, that'd be great.
Gadi

From: Hanslep, Malle (MOF) <Malle.Hanslep@ontario.ca>
Sent: Friday, April 21, 2017 7:54:48 PM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Hi Gadi

I think that would be fine. I don't know who in particular at TBS legal might be looking at this although it might be Nick Smook and Paul Kaufman

Malle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Gadi Mayman
Sent: Friday, April 21, 2017 19:05
To: Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Subject: Re: Guarantee

Thanks. Just a question, would it make sense to share your response to Energy Legal with TB Legal, as they have an interest in s28 of the FAA, and given that their Deputy and Associate Deputy expresses strong views on the need for the Minister of Finance to hold responsibility for the guarantee?

Gadi

From: Whitfield, Tobias P. (MOF)
Sent: Friday, April 21, 2017 5:23 PM
To: Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Malle Hanslep (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html-5Bleg.state.fl.us-5D&d=DwIF-g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=tFAAgRQTU0s9wAbu3-s9O6A8WaORM-zWr6qqj-3TfRk&s=GxEbjnHtLM-

1g7mwTF12PJe_FGp5ys-wfJS6Hfssvqo&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html&d=DwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=Y_fkJeRoJZD-LzAJEPnXaFZu2UhWImljUPa5aePQXvI&s=1HUfd1nbfvUi59LhqOORa7t3LtNdTaqJrkvGEtCXtac&e=> .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Gadi Mayman
To:	Malle Hanslep (MOF); Anna Strathy
Cc:	Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject:	Re: Guarantee
Date:	Friday, April 21, 2017 2:39:12 PM

This is the guarantee that the Federal government gave to Newfoundland Hydro (Nalcor) for the Muskrat Falls debt issue.

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:37 PM
To: Gadi Mayman; Anna Strathy
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF)
Subject: RE: Guarantee

Gadi: Also Carolyn mentioned a Nalcor guarantee which might be similar to what is being requested here?

From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:36 PM
To: Mayman, Gadi (OFA); Strathy, Anna (OFA)
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

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From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:33 PM
To: Mayman, Gadi (OFA); 'anna.strathy@ofina.ca'
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF)
Subject: FW: Guarantee

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Malle Hanslep
Deputy Director
Ministry of the Attorney General
Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
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Sent: April 21, 2017 12:49 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

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Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
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To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

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We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Gadi Mayman
To:	Malle Hanslep (MOF); Anna Strathy
Cc:	Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject:	Re: Guarantee
Date:	Friday, April 21, 2017 2:39:12 PM

This is the guarantee that the Federal government gave to Newfoundland Hydro (Nalcor) for the Muskrat Falls debt issue.

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 2:37 PM
To: Gadi Mayman; Anna Strathy
Cc: Michael Waterston (MOF); Tobias P. Whitfield (MOF)
Subject: RE: Guarantee

Gadi: Also Carolyn mentioned a Nalcor guarantee which might be similar to what is being requested here?

From: Hanslep, Malle (MOF)
Sent: April 21, 2017 2:36 PM
To: Mayman, Gadi (OFA); Strathy, Anna (OFA)
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF)
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Subject:	Re: Guarantee
Date:	Friday, April 21, 2017 2:37:56 PM

I think that some combination of Mike, Ron and Ken would make sense as the people at the OFA to speak with, so I've copied them on this response.

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To: Malle Hanslep (MOF); Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Date: Friday, April 21, 2017 8:07:28 PM

Thanks, Malle, if you wouldn't mind sharing it with Nick or Paul, that'd be great.

Gadi

From: Hanslep, Malle (MOF)
Sent: Friday, April 21, 2017 7:54:48 PM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee

Hi Gadi

I think that would be fine. I don't know who in particular at TBS legal might be looking at this although it might be Nick Smook and Paul Kaufman

Malle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Gadi Mayman
Sent: Friday, April 21, 2017 19:05
To: Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Subject: Re: Guarantee

Thanks. Just a question, would it make sense to share your response to Energy Legal with TB Legal, as they have an interest in s28 of the FAA, and given that their Deputy and Associate Deputy expresses strong views on the need for the Minister of Finance to hold responsibility for the guarantee?

Gadi

From: Whitfield, Tobias P. (MOF)
Sent: Friday, April 21, 2017 5:23 PM
To: Gadi Mayman; Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Malle Hanslep (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

Please see below our response to Energy Legal on the guarantee provisions, and attached our first draft of a provision for the legislation. We will let you know what the response is from Energy as they consider their draft over the weekend.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

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Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html-5Bleg.state.fl.us-5D&d=DwIF-g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=tFAAgRQTU0s9wAbu3-s9O6A8WaORM-zWr6qqj-3TfRk&s=GxEbjnHtLM-1g7mwTF12PJe_FGp5ys-wfJS6Hfssvqo&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html&d=DwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=Y_fkJeRoJZD-LzAJEPnXaFZu2UhWImljUPa5aePQXvI&s=1HUfd1nbfvUi59LhqOORa7t3LtNdTaqJrkvGEtCXtac&e=> .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

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Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

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Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Date: Friday, April 21, 2017 8:07:28 PM

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Ministry of Finance
tobias.whitfield@ontario.ca
Phone: 416-325-1456

From: Whitfield, Tobias P. (MOF)
Sent: April 21, 2017 5:20 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

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given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

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Toby

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From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
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Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : http://www.leg.state.fl.us/Statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0366/Sections/0366.95.html[leg.state.fl.us] .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
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From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

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Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From:	Gadi Mayman
To:	Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc:	Malle Hanslep (MOF); Michael Waterston (MOF)
Subject:	Re: Guarantee
Date:	Friday, April 21, 2017 7:05:11 PM

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Gadi

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Sent: Friday, April 21, 2017 5:23 PM
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Cc: Malle Hanslep (MOF); Michael Waterston (MOF)
Subject: FW: Guarantee

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Cc:	Michael Waterston (MOF); Tobias P. Whitfield (MOF); Ken Kandeepan; Ronald Kwan; Mike Manning
Subject:	Re: Guarantee
Date:	Friday, April 21, 2017 2:58:42 PM

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Gadi

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Sent: Friday, April 21, 2017 2:53 PM
To: Gadi Mayman; Anna Strathy
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Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF); Kandeepan, Ken (OFA); Kwan, Ronald (OFA); Manning, Mike (OFA)
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To: Mayman, Gadi (OFA); 'anna.strathy@ofina.ca'
Cc: Waterston, Michael (MOF); Whitfield, Tobias P. (MOF)
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Ministry of Finance Legal Services Branch
Telephone: 416-325-1457
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Malle, can we give you a call around 1:30? In the meantime, I attach a summary prepared by the investment dealers (CIBC, Goldman) advising OPG of the types of guarantees that they are expecting to see as part of this proposal.

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Cc:	Michael Waterston (MOF)
Subject:	Re: Guarantee
Date:	Saturday, April 22, 2017 10:40:50 AM

That approach makes sense to me.

Thanks,
Gadi

From: Hanslep, Malle (MOF)
Sent: Saturday, April 22, 2017 10:32 AM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: RE: Guarantee

Hi Gadi,
I was thinking about the approach further and I think it would be best if I write to Len Hatzis (legal director at TBS) and Carolyn (so she is aware) first to let Len know the background that the DM of TBS is in favour of the Minister of Finance signing any required guarantee (although maybe he is well aware of this already) and also MOF/OFA view that we shouldn't exempt generally transactions under the new proposed Act from s. 28.
Then Len can let me know which TBS counsel are working on it as I think that it may be Nick and Paul but don't know for sure and don't know what their involvement on this file has been and I don't think I should send the email to TBS without letting Carolyn know.
]Malle

From: Gadi Mayman [mailto:Gadi.Mayman@ofina.on.ca]
Sent: April-21-17 8:07 PM
To: Hanslep, Malle (MOF); Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Waterston, Michael (MOF)
Subject: Re: Guarantee
Thanks, Malle, if you wouldn't mind sharing it with Nick or Paul, that'd be great.
Gadi

From: Hanslep, Malle (MOF) <Malle.Hanslep@ontario.ca>
Sent: Friday, April 21, 2017 7:54:48 PM
To: Gadi Mayman; Tobias P. Whitfield (MOF); Ronald Kwan; Anna Strathy; Ken Kandeepan; Mike Manning
Cc: Michael Waterston (MOF)
Subject: Re: Guarantee
Hi Gadi

I think that would be fine. I don't know who in particular at TBS legal might be looking at this although it might be Nick Smook and Paul Kaufman

Malle

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Gadi Mayman
Sent: Friday, April 21, 2017 19:05
To: Whitfield, Tobias P. (MOF); Kwan, Ronald (OFA); Strathy, Anna (OFA); Kandeepan, Ken (OFA); Manning, Mike (OFA)
Cc: Hanslep, Malle (MOF); Waterston, Michael (MOF)
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Cc: Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

We have discussed this with the OFA, and we have endeavoured to provide a provision that we think should allow the financial guarantee being contemplated. Please let us know if you think it provides the necessary scope for what would be required to meet the Province's needs. We deleted the existing provision, although if you think that more general contractual authority is needed, something else could be considered. However, we don't think that it is appropriate to have a statutory appropriation for such general indemnity and guarantee provisions.

We would expect that the guarantee would be capped and only provide for the repayment of the principal and interest of the debt securities of the financial asset owner, and that would usually be done in the OIC.

We don't have any experience with performance guarantees. Is there a need for the Minister of Energy to require performance by the LDCs? We were also wondering if Blakes or another party involved in these discussions might have an example of what is being considered.

We also removed the exemption from s. 28 of the FAA. We have discussed this with OFA staff, and given the importance and breadth of this Act and Program, it doesn't seem appropriate to exempt the entire Act from s. 28 of the FAA.

Best
Toby

Tobias Whitfield
Counsel, Legal Services Branch
Ministry of Finance
tobias.whitfield@ontario.ca>
Phone: 416-325-1456

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 21, 2017 2:37 PM
To: Hanslep, Malle (MOF); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Malle & Toby – thanks for speaking to us about the Ontario Fair Hydro Plan proposal. I have attached information that we have about the US arrangements. Here is a link to the Florida statute (Duke): : https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html-5Bleg.state.fl.us-5D&d=DwIF-g&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=tFAAgRQTU0s9wAbu3-s9O6A8WaORM-zWr6qqj-3TfRk&s=GxEbjnHtLM-

1g7mwTF12PJe_FGp5ys-wfJS6Hfssvqo&e= <https://urldefense.proofpoint.com/v2/url?u=http-3A__www.leg.state.fl.us_Statutes_index.cfm-3FApp-5Fmode-3DDisplay-5FStatute-26Search-5FString-3D-26URL-3D0300-2D0399_0366_Sections_0366.95.html&d=DwMFAg&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=OdoCVLs6i-6reBTUJh9PAGSfpmSjeJXGKKb9SzvJOII&m=Y_fkJeRoJZD-LzAJEPnXaFZu2UhWImljUPa5aePQXvI&s=1HUfd1nbfvUi59LhqOORa7t3LtNdTaqJrkvGEtCXtac&e=> .

I will share any more information about the guarantee that I see. I also attach the current version of the legislation just in case you received something different.

Carolyn

From: Hanslep, Malle (MOF)
Sent: April-21-17 12:26 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI); Waterston, Michael (MOF)
Cc: Johnson, Paul (ENERGY/MEDEI/MRI); Whitfield, Tobias P. (MOF)
Subject: RE: Guarantee

Hi Carolyn,

Thanks for your email. Would it be possible to arrange a conference call today with yourself or your counsel most knowledgeable on this proposed securitization and transaction so that we can get an understanding of it and how it fits into any proposed authorizing legislation. Unfortunately we are not familiar with the proposed transaction although we have seen some general background information about the proposal. What role would a guarantee of investment dealers have in the transaction? We do have a copy of the legislation that we got via our clients at OFA and they were more engaged in the issue of a future proposed equity injection, but the most recent version that we have seen does not mention guarantees although there seems to be a very general contract authorization section. Of course, we have to generally think about s. 28 as well.

A call today to over the main elements of the proposed transaction and the legislation would be very helpful so that we can get back to Gadi.

Malle

From: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Sent: April 20, 2017 2:33 PM
To: Waterston, Michael (MOF)
Cc: Hanslep, Malle (MOF); Johnson, Paul (ENERGY/MEDEI/MRI)
Subject: RE: Guarantee

Hi Michael & Malle – we will be sending you draft legislation to take a look at. Actual guarantees will follow later.

This relates to the government's Fair Hydro Plan and the promise to reduce rates by 25% by July. We are doing a sort of securitization, for which the legislation will provide a framework. We are contemplating provisions that allow "the Minister" to enter into agreements with respect to transactions contemplated by the legislation. Gadi and DM Angus are of the view that Minister should be MOF, as the agreements are likely to be guarantees to investment dealers. Indemnities for the boards of OPG and IESO will also be required, although we didn't talk about who would sign those.

Happy to answer your questions or walk you through the proposed bill.

Carolyn

From: Waterston, Michael (MOF)
Sent: April-20-17 2:25 PM
To: Calwell, Carolyn (ENERGY/MEDEI/MRI)
Cc: Hanslep, Malle (MOF)
Subject: Guarantee

Hi Carolyn,

Gadi Mayman gave us a heads up that you might be giving us a call about a proposed guarantee that the Minister of Finance may be required to sign in relation to the changes to the global adjustment.

We're happy to discuss this. This afternoon is busy but tomorrow afternoon may work.

Thanks!

Michael

Michael Waterston
Legal Director
Ontario Ministry of the Attorney General
Legal Services Branch, Ministry of Finance
416-326-7918

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From: Ronald Kwan
To: Scott Nelms (ENERGY)
Cc: Mike Manning
Subject: Re: OEFC equity infusions to OPG
Date: Wednesday, March 08, 2017 8:39:46 AM

Hi Scott,

Sure. Preferably between 1 and 4.

Ron

On Mar 8, 2017, at 8:18 AM, Nelms, Scott (MOF) <Scott.Nelms@ontario.ca> wrote:

> Hi Mike, Ron,
> OPG has asked to meet with the Province to talk about financing arrangements for the Fair Hydro Plan. Gadi suggested that you would be the appropriate points of contact for this stream of work. I know this is short notice, but wonder if you might have availability to start the conversation with OPG this afternoon. I am going to pull in Energy staff as well and will send around an invite once we find a time that works.
> Thanks,
> Scott
> Scott Nelms
> Electricity Investment and Governance Secretariat | Ministry of Finance
> 7th Floor | 375 University ave. | Toronto, ON
> w: (416) 212-6469 | c: (647) 330-2681
> scott.nelms@ontario.ca

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Cc:	Mike Manning; Anna Strathy; Gavin He; Ken Kandeepan
Subject:	Re: OFA : IESO
Date:	Thursday, April 13, 2017 11:26:27 AM
Attachments:	image001.png

Yes, that was the crux of the OEB's concern, given that's not how the system currently works when a ratepayer doesn't pay their bill.

From: Ronald Kwan
Sent: Thursday, April 13, 2017 11:06 AM
To: Gadi Mayman
Cc: Mike Manning; Anna Strathy; Gavin He; Ken Kandeepan
Subject: RE: OFA : IESO

Hi Gadi,
All very interesting.
On one point, how would a thread directly from individual ratepayers to the lenders to the GA smoothing work? That would seem particularly challenging.
Ron

From: Gadi Mayman
Sent: April-13-17 10:47
To: Ronald Kwan ; Ken Kandeepan
Cc: Mike Manning ; Anna Strathy ; Gavin He
Subject: Re: OFA : IESO

Thanks, this came up at this morning's rate mitigation meeting, and the IESO people were happy to hear that we're on this, as they're a little nervous about how they're going to finance the regulatory asset until OPG is set up to take it on and pay for it.
I'm adding Ken to close the loop on the exchange that we had last night about the OPG letter - I asked Serge to add in the OFA, and he instructed Steen to do so, and, yes, the letter will be posted, at some point, on OPG's website.
In the half hour that I was able to attend the meeting, the discussion was around the legislation. The biggest point of contention was about OPG's need to have a direct recourse to ratepayers, and the legislative need for a thread directly from individual ratepayers to the lenders to the GA smoothing. The OEB doesn't like that concept at all. The other point that is of interest to us is that they are not looking at putting the guarantee mechanism into the legislation - although there will be some description in the legislation about what, I think they called indemnification will be needed, and then they will leave the guarantee to a commercial one. No surprise that OPG's dealer advisors are saying they need a full provincial guarantee, which OPG is pushing back on, and saying that the guarantee can only be if a future government changes the value of the regulatory asset (this is where the indemnification language in the legislation is necessary). Cindy, of course, as well as me for different reasons, is fussed about the nature of that guarantee, so we asked if they could sort that out with the dealers before the legislation is tabled. We don't want to end up with the dealers holding OPG hostage six months from now - not that they'd ever do that, would they Mike ?
I'm sure Scott will send out his fuller synopsis later today, and that'll also cover what happened in the last hour, after I'd left.
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> **To:** Gadi Mayman
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> **Subject:** OFA : IESO
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> Mr. Mayman,
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> Kim and I would like to set up a 30min call with you to discuss the proposed Fair Hydro rollout and the potential impact on the IESO credit needs.
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Subject: Re: OFA : IESO
Date: Thursday, April 13, 2017 10:46:47 AM
Attachments: OutlookEmoji-.png

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From: Ken Kandeepan
To: Gadi Mayman
Cc: Mike Manning; Bonnie Lemcke; Christina Zhang
Subject: Re: OFHP - Media Briefing-Mar1_800.pptx
Date: Wednesday, March 01, 2017 10:17:44 PM

Thanks, as expected very limited detail on how the refinancing of the GA would actually work.

Ken k

On Mar 1, 2017, at 10:12 PM, Gadi Mayman <Gadi.Mayman@ofina.on.ca> wrote:

Begin forwarded message:

From: "McLean, David (MOF)" <David.McLean@ontario.ca>
Date: March 1, 2017 at 9:51:50 PM EST
To: "Mayman, Gadi (OFA)" <Gadi.Mayman@ofina.on.ca>, "Kwan, Ronald (OFA)" <Ronald.Kwan@ofina.on.ca>, "Nelms, Scott (MOF)" <Scott.Nelms@ontario.ca>, "Schuurman, Tim (MOF)" <Tim.Schuurman@ontario.ca>
Cc: "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
Subject: Fw: OFHP - Media Briefing-Mar1_800.pptx

Looks like there was a mistake. Use this version.

Sent from my BlackBerry 10 smartphone on the Rogers network.
Original Message
From: Thompson, Scott (MOF) <Scott.Thompson@ontario.ca>
Sent: Wednesday, March 1, 2017 9:49 PM
To: McLean, David (MOF)
Subject: FW: OFHP - Media Briefing-Mar1_800.pptx

From: Imbrogno, Serge (ENERGY)
Sent: Wednesday, March 01, 2017 9:49:43 PM (UTC-05:00) Eastern Time (US & Canada)
To: Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)
Cc: Bromm, William (CAB); Katona, Keley (ENERGY)
Subject: OFHP - Media Briefing-Mar1_800.pptx

Sorry, this is the final. Disregard my last email.

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Cc: "Young, Gwendolynne (MOF)" <Gwendolynne.Young@ontario.ca>, "Pearce, Christopher (MOF)" <Christopher.Pearce@ontario.ca>
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From:	Gadi Mayman
To:	Ronald Kwan
Cc:	Ken Kandeepan; Mike Manning; Gavin He; Anna Strathy
Subject:	Re: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 9:36:42 PM

I'll try to cover both those points, but I have to leave the meeting early as I have a 9 am meeting with Scott that I have to be at. I'll try to inquire before I leave.

On Apr 12, 2017, at 7:37 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Good point Ken.
> I'd expect that this letter could be public (OPG posts certain correspondence from its Shareholder on its website). Perhaps Gadi could ask tomorrow if that would be the case with this letter.
> Ron
>
> **From:** Ken Kandeepan
> **Sent:** April-12-17 19:20
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>
> **Subject:** RE: Rate Mitigation Implementation Meeting - April 13, 2017
> Hi Gadi
> One comment, Minister's memo to OPG, 4th para, first sentence should include the OFA among the entities listed.
> Thanks
> Ken K
>
> **From:** Gadi Mayman
> **Sent:** Wednesday, April 12, 2017 5:35 PM
> **To:** Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Ken Kandeepan <Ken.Kandeepan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
> **Cc:** Gavin He <Gavin.He@ofina.on.ca>; Anna Strathy <Anna.Strathy@ofina.on.ca>
> **Subject:** FW: Rate Mitigation Implementation Meeting - April 13, 2017
>
> **From:** Katona, Keley (ENERGY) [mailto:Keley.Katona@ontario.ca]
> **Sent:** Wednesday, April 12, 2017 5:33 PM
> **To:** Steen Hume (CAB) <Steen.Hume@ontario.ca>; Kaili Sermat-Harding (ENERGY) <Kaili.Sermat-Harding@ontario.ca>; Michael Reid (ENERGY) <Michael.Reid@ontario.ca>; Carolyn Calwell (MCSS) <Carolyn.Calwell@ontario.ca>; Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; 'jeffrey.lyash@opg.com' (jeffrey.lyash@opg.com) <jeffrey.lyash@opg.com>; HARTWICK Ken -FINANCE (ken.hartwick@opg.com) <ken.hartwick@opg.com>; Rosemaire Leclair <rosemarie.leclair@ontarioenergyboard.ca>; Mary Anne Aldred (maryanne.aldred@ontarioenergyboard.ca) <maryanne.aldred@ontarioenergyboard.ca>; Campbell, Bruce (bruce.campbell@ieso.ca) <bruce.campbell@ieso.ca>; Kim Marshall

(Kim.Marshall@ieso.ca) <Kim.Marshall@ieso.ca>; Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Helen Angus (MOHLTC) <Helen.Angus@ontario.ca>; Steven Davidson (MTCS) <Steven.Davidson@ontario.ca>; 'Martine Band' <Martine.Band@ontarioenergyboard.ca>; 'CROZZOLI Carlo -CBUSDEV&STRT' <carlo.crozzoli@opg.com>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; LEE John - TREASURY <john.s.lee@opg.com>
Cc: Serge Imbrogno (ENERGY) <Serge.Imbrogno@ontario.ca>; Andrew Teliszewsky (ENERGY) <Andrew.Teliszewsky@ontario.ca>; Matt Whittington (ENERGY) <Matt.Whittington@ontario.ca>; Baker, Carys (ENERGY) <Carys.Baker@ontario.ca>; Kyle MacIntyre (MOF) <Kyle.MacIntyre@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>; Robert Foster (MOF) <Robert.Foster@ontario.ca>; jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca' <sarah.branco@ontarioenergyboard.ca>; Turnevicius, Lorraine <lorraine.turnevicius@ieso.ca>; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY) <Francesca.Bungaro-Yemec@ontario.ca>
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

Good evening,

Please find attached the material for discussion tomorrow morning.

Thanks,

Keley

From:	Gadi Mayman
To:	Ronald Kwan
Cc:	Ken Kandeepan; Mike Manning; Gavin He; Anna Strathy
Subject:	Re: Rate Mitigation Implementation Meeting - April 13, 2017
Date:	Wednesday, April 12, 2017 9:36:42 PM

I'll try to cover both those points, but I have to leave the meeting early as I have a 9 am meeting with Scott that I have to be at. I'll try to inquire before I leave.

On Apr 12, 2017, at 7:37 PM, Ronald Kwan <Ronald.Kwan@ofina.on.ca> wrote:

> Good point Ken.
> I'd expect that this letter could be public (OPG posts certain correspondence from its Shareholder on its website). Perhaps Gadi could ask tomorrow if that would be the case with this letter.
> Ron
>
> **From:** Ken Kandeepan
> **Sent:** April-12-17 19:20
> **To:** Gadi Mayman <Gadi.Mayman@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Mike Manning <Mike.Manning@ofina.on.ca>
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(Kim.Marshall@ieso.ca) <Kim.Marshall@ieso.ca>; Scott Thompson (CAB) <Scott.Thompson@ontario.ca>; Helen Angus (MOHLTC) <Helen.Angus@ontario.ca>; Steven Davidson (MTCS) <Steven.Davidson@ontario.ca>; 'Martine Band' <Martine.Band@ontarioenergyboard.ca>; 'CROZZOLI Carlo -CBUSDEV&STRT' <carlo.crozzoli@opg.com>; Gadi Mayman <Gadi.Mayman@ofina.on.ca>; LEE John - TREASURY <john.s.lee@opg.com>
Cc: Serge Imbrogno (ENERGY) <Serge.Imbrogno@ontario.ca>; Andrew Teliszewsky (ENERGY) <Andrew.Teliszewsky@ontario.ca>; Matt Whittington (ENERGY) <Matt.Whittington@ontario.ca>; Baker, Carys (ENERGY) <Carys.Baker@ontario.ca>; Kyle MacIntyre (MOF) <Kyle.MacIntyre@ontario.ca>; David McLean (MOF) <David.McLean@ontario.ca>; Robert Foster (MOF) <Robert.Foster@ontario.ca>; jordan.penic@ieso.ca; 'sarah.branco@ontarioenergyboard.ca' <sarah.branco@ontarioenergyboard.ca>; Turnevicius, Lorraine <lorraine.turnevicius@ieso.ca>; catriona.king@opg.com; Francesca Bungaro-Yemec (ENERGY) <Francesca.Bungaro-Yemec@ontario.ca>
Subject: Rate Mitigation Implementation Meeting - April 13, 2017

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Thanks,

Keley

From:	Nelms, Scott (MOF)
To:	Mike Manning; "LEE John -TREASURY"; Ronald Kwan; Steen Hume (CAB)
Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY; Carlos Yep; James Devine; Montgomery, Kaitlin (MOF)
Subject:	Re: Subcommittee - Equity Injection/OPG Share purchase
Date:	Friday, March 10, 2017 8:37:26 AM

Good Morning,

Kaitlin Montgomery will help out from my group and will provide updates to Steen's group.

Thanks,
Scott

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Mike Manning
Sent: Thursday, March 9, 2017 4:42 PM
To: 'LEE John -TREASURY'; Nelms, Scott (MOF); Kwan, Ronald (OFA); Hume, Steen (ENERGY)
Cc: CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY; Yep, Carlos (OFA); Devine, James (OFA)
Subject: RE: Subcommittee - Equity Injection/OPG Share purchase

Hi John:
I've asked Carlos Yep to help out on this part of the project.
Thanks, Mike

From: LEE John -TREASURY [mailto:john.s.lee@opg.com]
Sent: Thursday, March 09, 2017 1:29 PM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca>; Mike Manning <Mike.Manning@ofina.on.ca>; Ronald Kwan <Ronald.Kwan@ofina.on.ca>; Steen Hume (CAB) <Steen.Hume@ontario.ca>
Cc: CROZZOLI Carlo -CBUSDEV&STRT <carlo.crozzoli@opg.com>; GRECO Clara -LAWDIV <clara.greco@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>
Subject: Subcommittee - Equity Injection/OPG Share purchase

Steen/Mike/Ron:

Further to our call, can you identify a member from your team who can work with OPG (Clara Greco) on this joint initiative to establish a process to facilitate the equity injection requirements necessary to support the GA deferral financing.

Thanks

John

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To:	Mike Manning; "LEE John -TREASURY"; Ronald Kwan; Steen Hume (CAB)
Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY; Carlos Yep; James Devine; Montgomery, Kaitlin (MOF)
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Cc: CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY; Yep, Carlos (OFA); Devine, James (OFA)
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Cc: CROZZOLI Carlo -CBUSDEV&STRT <carlo.crozzoli@opg.com>; GRECO Clara -LAWDIV <clara.greco@opg.com>; RYFA Ken -TREASURY <ken.ryfa@opg.com>; HAHN PARKER Janet -TREASURY <j.hahnparker@opg.com>
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From: Hume, Steen (ENERGY)
To: Thom, Trevor; Hilary Cox (ENE)
Cc: Mike Manning; Scott Nelms (ENERGY)
Subject: Re: Today"s meeting
Date: Monday, April 03, 2017 10:49:27 AM

Hi. Can you share the details with the TD.

Thanks

Sent from my iPad

On Apr 3, 2017, at 10:17 AM, Thom, Trevor
<Trevor.Thom@tdsecurities.com<mailto:Trevor.Thom@tdsecurities.com>> wrote:

Can you please provide a dial-in/conference call details. 1-2 of us will attend in person, but other team members would like to dial in. Thx.

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities

Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com<mailto:trevor.thom@tdsecurities.com>

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AVIS : Message confidentiel dont le contenu peut être privilégié. Utilisation/divulgation interdites sans permission. Si reçu par erreur, prière d'aller au www.td.com/francais/avis_juridique<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.td.com_francais_avis-5Fjuridique&d=DwIFAw&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=-Xi2ptWtxVTbkWWBeQ2O1H0GlDELnHvcfrsrTGs19-A&s=VWMlN3JdjpOv3ELSCKnmKWQCxxJ4emSMvZuK2C9VUVI&e= > pour des instructions.

From: ASHBOURNE, STEPHEN
To: Mike Manning
Cc: Scott Nelms (ENERGY); James Devine; Carlos Yep
Subject: Re: Tomorrow"s meetings
Date: Wednesday, March 29, 2017 10:48:04 AM

Hi. I'm in your lobby. Steve

Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>
Dir: 416-863-3086<tel:416-863-3086>

On Mar 28, 2017, at 3:34 PM, Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>> wrote:

Hi Stephen:
I think your thoughts on the scope look fine. I suspect the dealers will have some useful input as well.
Mike

From: ASHBOURNE, STEPHEN [mailto:STEPHEN.ASHBOURNE@blakes.com]
Sent: Tuesday, March 28, 2017 10:22 AM
To: Scott Nelms (ENERGY) <Scott.Nelms@ontario.ca<mailto:Scott.Nelms@ontario.ca>>; Mike Manning <Mike.Manning@ofina.on.ca<mailto:Mike.Manning@ofina.on.ca>>
Cc: James Devine <James.Devine@ofina.on.ca<mailto:James.Devine@ofina.on.ca>>; Carlos Yep <Carlos.Yep@ofina.on.ca<mailto:Carlos.Yep@ofina.on.ca>>
Subject: RE: Tomorrow's meetings

Scott and Mike, here are some initial thoughts on the potential scope of the advisor role:

Advisor Role

· Review the proposal to issue “AAA” asset-backed securities serviced by cash flows from legislatively-created receivables owing by present and future electricity customers in Ontario

· Identify key requirements that should be contemplated in the legislation that creates the receivables and provides for their sale, collection and enforcement

· Advise on alternative ways to structure the cash flows from the receivables in order to optimize funding alternatives under a flexible capital markets funding platform

· Provide input into the treasury funding model, including based on alternative capital market and rating agency scenarios (including commenting on OPG’s specific funding proposals)

· Assess target capital markets based on the size and nature of the offerings and existing appetites for similar structured securities.

I hope that’s somewhat useful. Feel free to call if a discussion makes sense.
Regards, Steve
Stephen R. Ashbourne
Partner
stephen.ashbourne@blakes.com<mailto:stephen.ashbourne@blakes.com>
Dir: 416-863-3086

_____

<image001.gif>

Blake, Cassels & Graydon LLP
199 Bay Street, Suite 4000, Toronto ON M5L 1A9
Tel: 416-863-2400 Fax: 416-863-2653
blakes.com[blakes.com]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blakes.com&d=DwMGaQ&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=1H9hcuXHXemNr0y9vzf3f_uV4qZG7LKyzmmlHXyGnWM&s=58YIQ0Fqw4RP2Q1iizDVUavj8kgNHGDkJ3p4Cv2RBCE&e=> | Twitter[twitter.com]<https://urldefense.proofpoint.com/v2/url?u=http-3A__twitter.com_BlakesLaw_&d=DwMGaQ&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=1H9hcuXHXemNr0y9vzf3f_uV4qZG7LKyzmmlHXyGnWM&s=pr2lUparmy8vU0bpcxjoWg8bGFXeeOWSm5eB2EUr7Co&e=> | Unsubscribe[blakes.com]<https://urldefense.proofpoint.com/v2/url?u=http-3A__www.blakes.com_English_Resources_Bulletins_Pages_unsubscribe.aspx&d=DwMGaQ&c=qG_YucLTZOaBAapRaQkKEgrMWFFI0Cr1_eykjn9FtiQ&r=gV-xgZHI0tggSwOPXBdMOr4DyITzOyaIKJLqH9Oy-40&m=1H9hcuXHXemNr0y9vzf3f_uV4qZG7LKyzmmlHXyGnWM&s=WGf9j6jPy1E1C_vdq9RYq0_b5JNVZcKHyoF5MnLVLvI&e=>

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From: Nelms, Scott (MOF) [mailto:Scott.Nelms@ontario.ca]
Sent: Tuesday, March 28, 2017 9:31 AM
To: Manning, Mike (OFA); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)

Subject: RE: Tomorrow's meetings
No problem. That is better for me. Thanks for organizing.
From: Mike Manning [mailto:Mike.Manning@ofina.on.ca]
Sent: March 28, 2017 9:14 AM
To: Nelms, Scott (MOF); ASHBOURNE, STEPHEN
Cc: Devine, James (OFA); Yep, Carlos (OFA)
Subject: Tomorrow's meetings
Hi Guys:
Always challenging to arrange meetings, so will give you the current schedule which differs a bit from yesterday's:

• 11:00 Scotia

• 1:00 BMO

• 1:30 TD

• 2:00 Recap & selection
Sorry for the changes. I'm hoping that these times work for everyone. Let me know if thre is a problem.
Thanks, Mike

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Cc:	CROZZOLI Carlo -CBUSDEV&STRT; GRECO Clara -LAWDIV; RYFA Ken -TREASURY; HAHN PARKER Janet -TREASURY
Subject:	Subcommittee - Equity Injection/OPG Share purchase
Date:	Thursday, March 09, 2017 1:28:46 PM

Steen/Mike/Ron:

Further to our call, can you identify a member from your team who can work with OPG (Clara Greco) on this joint initiative to establish a process to facilitate the equity injection requirements necessary to support the GA deferral financing.

Thanks

John

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From: TD DCM
Cc: Becker, Andrew; Hyatt, Emma; McDonald, Greg; Pong, Brian; Scace, Patrick; Laing, Mark; Mosley, Theresa
Subject: TD Securities: Generation C$ Secondary Run- April 5, 2017
Date: Wednesday, April 05, 2017 1:33:46 PM

Please see below an updated Generation run for April 5, 2017:

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(5-Apr-17)			Benchmark
AQNCN	5.5	25-Jul-18	95	/	85	CAN 4.25 18
AQNCN	4.82	15-Feb-21	145	/	135	CAN 0.75 20
AQNCN	4.65	15-Feb-22	158	/	151	CAN 0.75 21
AQNCN	4.09	17-Feb-27	190	/	183	CAN 1.5 26
BRUPOW	2.844	23-Jun-21	110	/	105	CAN 3.25 21
BRUPOW	3	21-Jun-24	141	/	136	CAN 2.5 24
BRUPOW	3.969	23-Jun-26	162	/	157	CAN 1.5 26
BRUPOW	4.01	21-Jun-29	195	/	188	CAN 5.75 29
CPXCN	4.85	21-Feb-19	152	/	142	CAN 1.75 19
CPXCN	5.276	16-Nov-20	190	/	180	CAN 0.75 20
EMACN	4.83	2-Dec-19	100	/	90	CAN 1.75 19
EMACN	2.9	16-Jun-23	125	/	115	CAN 1.5 23
LOWMAT	2.228	23-Oct-17	52	/	47	CAN 1.5 17
LOWMAT	4.331	18-May-21	69	/	64	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	81	/	76	CAN 2.5 24
LOWMAT	2.307	21-Oct-26	102	/	97	CAN 1.5 26
LOWMAT	5.139	18-May-41	146	/	141	CAN 2.75 48
LOWMAT	4.944	21-Sep-43	145	/	140	CAN 2.75 48
LOWMAT	4.176	23-Feb-46	145	/	140	CAN 2.75 48
LOWMAT	4.175	23-Apr-52	153	/	148	CAN 2.75 48
NWRWPT	2.1	23-Feb-22	95	/	90	CAN 2.75 22
NWRWPT	3.2	22-Jul-24	115	/	110	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	128	/	123	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	155	/	145	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	145	/	135	CAN 2.75 48
NWRWPT	4.75	1-Jun-37	169	/	164	CAN 2.75 48
NWRWPT	4.35	10-Jan-39	170	/	165	CAN 2.75 48
NWRWPT	3.7	23-Feb-43	168	/	163	CAN 2.75 48
NWRWPT	4.05	22-Jul-44	169	/	164	CAN 2.75 48

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From: TD DCM
Cc: Becker, Andrew; Hyatt, Emma; McDonald, Greg; Pong, Brian; Scace, Patrick; Laing, Mark; Mosley, Theresa
Subject: TD Securities: Generation C$ Secondary Run- April 19, 2017
Date: Wednesday, April 19, 2017 12:14:33 PM

Please see below an updated Generation run for April 19, 2017:

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(19-Apr-17)			Benchmark
AQNCN	5.5	25-Jul-18	80	/	70	CAN 4.25 18
AQNCN	4.82	15-Feb-21	140	/	130	CAN 0.75 20
AQNCN	4.65	15-Feb-22	150	/	140	CAN 0.75 21
AQNCN	4.09	17-Feb-27	190	/	180	CAN 1.5 26
BRUPOW	2.844	23-Jun-21	105	/	95	CAN 3.25 21
BRUPOW	3	21-Jun-24	132	/	122	CAN 2.5 24
BRUPOW	3.969	23-Jun-26	150	/	140	CAN 1.5 26
BRUPOW	4.01	21-Jun-29	180	/	170	CAN 5.75 29
CPXCN	4.85	21-Feb-19	140	/	130	CAN 1.75 19
CPXCN	5.276	16-Nov-20	170	/	160	CAN 0.75 20
EMACN	4.83	2-Dec-19	85	/	75	CAN 1.75 19
EMACN	2.9	16-Jun-23	121	/	116	CAN 1.5 23
EMACN	3.55	15-Jun-26	140	/	135	T 2.25 27
LOWMAT	2.228	23-Oct-17	52	/	47	CAN 1.5 17
LOWMAT	4.331	18-May-21	67	/	62	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	81	/	76	CAN 2.5 24
LOWMAT	2.307	21-Oct-26	95	/	90	CAN 1.5 26
LOWMAT	5.139	18-May-41	136	/	131	CAN 2.75 48
LOWMAT	4.944	21-Sep-43	136	/	131	CAN 2.75 48
LOWMAT	4.176	23-Feb-46	135	/	130	CAN 2.75 48
LOWMAT	4.175	23-Apr-52	146	/	136	CAN 2.75 48
NWRWPT	2.1	23-Feb-22	93	/	87	CAN 0.5 22
NWRWPT	3.2	22-Jul-24	109	/	104	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	121	/	116	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	150	/	140	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	140	/	130	CAN 2.75 48
NWRWPT	4.75	1-Jun-37	165	/	160	CAN 2.75 48
NWRWPT	4.35	10-Jan-39	165	/	160	CAN 2.75 48
NWRWPT	3.7	23-Feb-43	165	/	160	CAN 2.75 48
NWRWPT	4.05	22-Jul-44	165	/	160	CAN 2.75 48

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From: TD DCM
Cc: Becker, Andrew; Drewitt, Kyle; Gubasta, Andrew; Hyatt, Emma; Laing, Mark; McDonald, Greg; Mosley, Theresa; Pong, Brian; Scace, Patrick
Subject: TD Securities: Generation C$ Secondary Run- January 4, 2017
Date: Wednesday, January 04, 2017 3:45:16 PM

Please see below an updated Generation run for January 4, 2017.

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(4-Jan-17)			Benchmark
AQNCN	5.5	25-Jul-18	147	/	137	CAN 4.25 18
AQNCN	4.82	15-Feb-21	190	/	180	CAN 0.75 20
AQNCN	4.65	15-Feb-22	203	/	193	CAN 0.75 21
BRUPOW	2.844	23-Jun-21	130	/	125	CAN 3.25 21
BRUPOW	3.969	23-Jun-16	188	/	183	CAN 1.5 26
CPXCN	4.85	21-Feb-19	190	/	175	CAN 1.75 19
CPXCN	5.276	16-Nov-20	210	/	200	CAN 0.75 20
EMACN	4.83	2-Dec-19	115	/	108	CAN 1.75 19
EMACN	2.9	16-Jun-23	150	/	143	CAN 1.5 23
LOWMAT	2.228	23-Oct-17	52	/	47	CAN 1.5 17
LOWMAT	4.331	18-May-21	75	/	70	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	90	/	85	CAN 2.5 24
LOWMAT	2.307	21-Oct-26	105	/	100	CAN 1.5 26
LOWMAT	5.139	18-May-41	147	/	142	CAN 2.75 48
LOWMAT	4.944	21-Sep-43	147	/	142	CAN 2.75 48
LOWMAT	4.176	23-Feb-46	146	/	141	CAN 2.75 48
LOWMAT	4.175	23-Apr-52	149	/	144	CAN 2.75 48
NWRWPT	2.1	23-Feb-22	86	/	81	CAN 2.75 22
NWRWPT	3.2	22-Jul-24	106	/	101	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	115	/	110	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	152	/	145	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	155	/	150	CAN 5.75 33
NWRWPT	4.75	1-Jun-37	155	/	150	CAN 5 37
NWRWPT	4.35	10-Jan-39	156	/	151	CAN 2.75 48
NWRWPT	3.7	23-Feb-43	155	/	150	CAN 2.75 48
NWRWPT	4.05	22-Jul-44	156	/	151	CAN 2.75 48

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From: TD DCM
Cc: Becker, Andrew; Hyatt, Emma; McDonald, Greg; Pong, Brian; Scace, Patrick; Laing, Mark; Mosley, Theresa
Subject: TD Securities: Generation C$ Secondary Run- January 18, 2017
Date: Wednesday, January 18, 2017 2:06:08 PM

Please see below an updated Generation run for January 18, 2017.

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(18-Jan-17)			Benchmark
AQNCN	5.5	25-Jul-18	135	/	125	CAN 4.25 18
AQNCN	4.82	15-Feb-21	175	/	165	CAN 0.75 20
AQNCN	4.65	15-Feb-22	185	/	175	CAN 0.75 21
AQNCN	4.09	17-Feb-27	231	/	224	CAN 1.5 26
BRUPOW	2.844	23-Jun-21	130	/	125	CAN 3.25 21
BRUPOW	3.969	23-Jun-26	177	/	172	CAN 1.5 26
CPXCN	4.85	21-Feb-19	183	/	168	CAN 1.75 19
CPXCN	5.276	16-Nov-20	203	/	188	CAN 0.75 20
EMACN	4.83	2-Dec-19	115	/	108	CAN 1.75 19
EMACN	2.9	16-Jun-23	145	/	138	CAN 1.5 23
LOWMAT	2.228	23-Oct-17	52	/	47	CAN 1.5 17
LOWMAT	4.331	18-May-21	75	/	70	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	90	/	85	CAN 2.5 24
LOWMAT	2.307	21-Oct-26	105	/	100	CAN 1.5 26
LOWMAT	5.139	18-May-41	146	/	141	CAN 2.75 48
LOWMAT	4.944	21-Sep-43	145	/	140	CAN 2.75 48
LOWMAT	4.176	23-Feb-46	144	/	139	CAN 2.75 48
LOWMAT	4.175	23-Apr-52	149	/	144	CAN 2.75 48
NWRWPT	2.1	23-Feb-22	86	/	81	CAN 2.75 22
NWRWPT	3.2	22-Jul-24	106	/	101	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	115	/	110	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	147	/	140	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	144	/	134	CAN 2.75 48
NWRWPT	4.75	1-Jun-37	156	/	151	CAN 2.75 48
NWRWPT	4.35	10-Jan-39	157	/	152	CAN 2.75 48
NWRWPT	3.7	23-Feb-43	155	/	150	CAN 2.75 48
NWRWPT	4.05	22-Jul-44	156	/	151	CAN 2.75 48

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From: TD DCM
Cc: Becker, Andrew; Hyatt, Emma; McDonald, Greg; Pong, Brian; Scace, Patrick; Laing, Mark; Mosley, Theresa
Subject: TD Securities: Generation C$ Secondary Run- March 22, 2017
Date: Wednesday, March 22, 2017 12:09:37 PM

Please see below an updated Generation run for March 22, 2017:

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(22-Mar-17)			Benchmark
AQNCN	5.5	25-Jul-18	95	/	85	CAN 4.25 18
AQNCN	4.82	15-Feb-21	147	/	137	CAN 0.75 20
AQNCN	4.65	15-Feb-22	160	/	153	CAN 0.75 21
AQNCN	4.09	17-Feb-27	197	/	190	CAN 1.5 26
BRUPOW	2.844	23-Jun-21	115	/	110	CAN 3.25 21
BRUPOW	3	21-Jun-24	145	/	140	CAN 2.5 24
BRUPOW	3.969	23-Jun-26	164	/	159	CAN 1.5 26
BRUPOW	4.01	21-Jun-29	195	/	188	CAN 5.75 29
CPXCN	4.85	21-Feb-19	165	/	155	CAN 1.75 19
CPXCN	5.276	16-Nov-20	198	/	188	CAN 0.75 20
EMACN	4.83	2-Dec-19	105	/	95	CAN 1.75 19
EMACN	2.9	16-Jun-23	132	/	122	CAN 1.5 23
LOWMAT	2.228	23-Oct-17	52	/	47	CAN 1.5 17
LOWMAT	4.331	18-May-21	72	/	67	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	89	/	84	CAN 2.5 24
LOWMAT	2.307	21-Oct-26	105	/	100	CAN 1.5 26
LOWMAT	5.139	18-May-41	148	/	143	CAN 2.75 48
LOWMAT	4.944	21-Sep-43	147	/	142	CAN 2.75 48
LOWMAT	4.176	23-Feb-46	147	/	142	CAN 2.75 48
LOWMAT	4.175	23-Apr-52	154	/	149	CAN 2.75 48
NWRWPT	2.1	23-Feb-22	97	/	90	CAN 2.75 22
NWRWPT	3.2	22-Jul-24	117	/	110	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	130	/	123	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	157	/	150	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	150	/	140	CAN 2.75 48
NWRWPT	4.75	1-Jun-37	172	/	162	CAN 2.75 48
NWRWPT	4.35	10-Jan-39	173	/	163	CAN 2.75 48
NWRWPT	3.7	23-Feb-43	173	/	163	CAN 2.75 48
NWRWPT	4.05	22-Jul-44	174	/	164	CAN 2.75 48

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From: TD DCM
Cc: Becker, Andrew; Hyatt, Emma; McDonald, Greg; Pong, Brian; Scace, Patrick; Laing, Mark; Mosley, Theresa
Subject: TD Securities: Generation C$ Secondary Run- September 21, 2016
Date: Wednesday, September 21, 2016 1:49:52 PM

Please see below an updated Generation run for September 21, 2016

TD Securities' Generation Run

Security			Bid		Ask	
Ticker	Coupon	Maturity	(21-Sep-16)			Benchmark
AQNCN	5.5	25-Jul-18	190	/	180	CAN 4.25 18
AQNCN	4.82	15-Feb-21	230	/	220	CAN 0.75 20
AQNCN	4.65	15-Feb-22	255	/	245	CAN 3.25 21
BRUPOW	2.844	23-Jun-21	163	/	158	CAN 3.25 21
BRUPOW	3.969	23-Jun-16	220	/	213	CAN 1.5 26
CPXCN	4.85	21-Feb-19	300	/	250	CAN 1.75 19
CPXCN	5.276	16-Nov-20	320	/	270	CAN 0.75 20
EMACN	2.96	13-Dec-16	65	/	55	CAN 1 16
EMACN	4.83	2-Dec-19	144	/	137	CAN 1.75 19
EMACN	2.9	16-Jun-23	182	/	175	CAN 1.5 23
LOWMAT	2.228	23-Oct-17	68	/	63	CAN 1.5 17
LOWMAT	4.331	18-May-21	97	/	92	CAN 3.25 21
LOWMAT	3.416	20-Jun-24	118	/	113	CAN 2.5 24
LOWMAT	5.139	18-May-41	167	/	162	CAN 3.5 45
LOWMAT	4.944	21-Sep-43	166	/	161	CAN 3.5 45
LOWMAT	4.176	23-Feb-46	166	/	161	CAN 3.5 45
LOWMAT	4.175	23-Apr-52	176	/	166	CAN 3.5 45
NWRWPT	2.1	23-Feb-22	116	/	111	CAN 2.75 22
NWRWPT	3.2	22-Jul-24	136	/	129	CAN 2.5 24
NWRWPT	3.2	24-Apr-26	148	/	141	CAN 1.5 26
NWRWPT	4.25	1-Jun-29	175	/	165	CAN 5.75 29
NWRWPT	4.15	1-Jun-33	185	/	175	CAN 5.75 33
NWRWPT	4.75	1-Jun-37	188	/	178	CAN 5 37
NWRWPT	4.35	10-Jan-39	188	/	181	CAN 3.5 45
NWRWPT	3.7	23-Feb-43	190	/	183	CAN 3.5 45
NWRWPT	4.05	22-Jul-44	190	/	183	CAN 3.5 45

Rob Ingratta | Rotating Associate | Debt Capital Markets | **TD Securities**

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From:	Ken Kandeepan
To:	Mike Manning; James Devine; Carlos Yep; John Kim; Bruno Amara
Cc:	John Psinas
Subject:	TDS.docx
Date:	Thursday, April 20, 2017 4:33:21 PM
Attachments:	TDS.docx

Hi all

As promised, John and I have tried to keep it as short as possible, feel free to edit.

Thanks

Ken k

Options for Equity Injection from TD Securities

When developing options for structuring the equity injection from the Province to OPG amounting to 44% of the debt incurred by the OPG Trust set up to purchase the regulatory asset from IESO the following underlying principles need to be addressed.

- The equity injection will be provided on a monthly/quarterly basis to OPG by the Province.
- The equity injection results in the Province, the sole shareholder of OPG receiving shares from OPG whose valuation is based on a determined and agreed upon methodology.
- This methodology can be as simple as book value or can be based on some kind of a DCF.
- Given the time limited nature of the equity injection the Province anticipates repayment at a future date.
- The potential for repayment can be implemented as follows:
    - The Province as the sole shareholder, as well as having vested legislative authority, can require OPG to issue dividends annually.
- The shares issues by OPG can include some kind of optionality to be exercised by the Province as and when repayment is required. The nature of the repayment should be flexible enough to request payment at a much earlier date than anticipated, given the potentiality of a new government's different policies subsequent to future elections.
    - OPG can issue preference shares again with some kind of optionality for repayment. Preference shares, especially those with a specified annual dividend will ensure that the Province remains whole in terms of the incremental interest costs it incurs on the equity injection.
- Other factors to be considered for repayment:
    - Should the senior and subordinated debt be ranked as the same and if so does this impact market access
    - Should the senior debt be repaid first or should repayment be on a pari-passu basis
    - OPG may have concerns about their own credit rating if the number of shares issued to the Province substantially dilutes key ratios.

From:	Ken Kandeepan
To:	Mike Manning; James Devine; Carlos Yep; John Kim; Bruno Amara
Cc:	John Psinas
Subject:	TDS.docx
Date:	Thursday, April 20, 2017 4:33:21 PM
Attachments:	TDS.docx

Hi all

As promised, John and I have tried to keep it as short as possible, feel free to edit.

Thanks

Ken k

Options for Equity Injection from TD Securities

When developing options for structuring the equity injection from the Province to OPG amounting to 44% of the debt incurred by the OPG Trust set up to purchase the regulatory asset from IESO the following underlying principles need to be addressed.

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- The equity injection results in the Province, the sole shareholder of OPG receiving shares from OPG whose valuation is based on a determined and agreed upon methodology.
- This methodology can be as simple as book value or can be based on some kind of a DCF.
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    - OPG can issue preference shares again with some kind of optionality for repayment. Preference shares, especially those with a specified annual dividend will ensure that the Province remains whole in terms of the incremental interest costs it incurs on the equity injection.
- Other factors to be considered for repayment:
    - Should the senior and subordinated debt be ranked as the same and if so does this impact market access
    - Should the senior debt be repaid first or should repayment be on a pari-passu basis
    - OPG may have concerns about their own credit rating if the number of shares issued to the Province substantially dilutes key ratios.

From:	John Kim
To:	Ken Kandeepan; Mike Manning
Cc:	Francisco Chinchon; Carlos Yep; Bruno Amara; John Psinas; James Devine
Subject:	TDS_v3.docx
Date:	Friday, April 21, 2017 11:48:20 AM
Attachments:	TDS_v3.docx

Hi Ken, Mike,

Let me know if this works.

I'm on the fence about the last bullet I added.

Thanks,

John

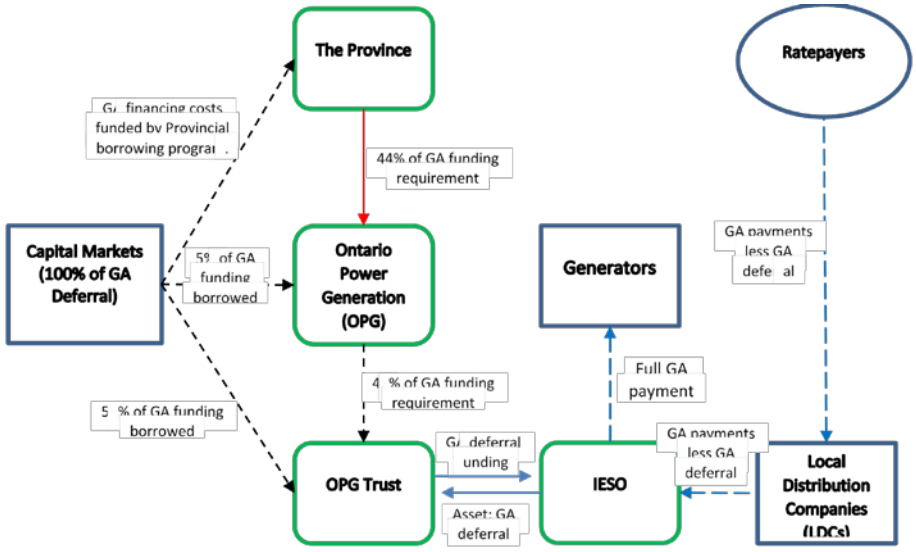
GA FINANCING – TD'S ADVICE SOUGHT ON CAPITAL CONTRIBUTION MECHANISM

The Capital Markets Division of the Ontario Financing Authority require TD advisors' recommendations and detailed descriptions of options vis-à-vis the proposal to provide capital ~~equity injection~~ to the Global Adjustment (GA) deferral proposal as part of the larger Ontario's Fair Hydro Plan, as announced on March 2, 2017.

Context

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses recovery deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers versus the cost of full payment to~~in order to fully compensate~~ generators.



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its capital

contributions ~~equity injection~~ through its annual borrowing program - from issuing debt into the capital markets.

Options for Equity Injection from TD Securities

The advice sought from TD could be summarized as follows:

When developing options for structuring the capital contributions ~~equity injection~~ from the Province to OPG for the~~amounting to~~ 44% of the ~~debt incurred~~financing requirement ~~-~~by the OPG Trust ~~set up~~ to purchase the regulatory asset from IESO, a number of ~~the following~~ underlying principles need to be addressed.

- While the Province is a sole shareholder of OPG, advice is sought to address potentially higher degrees of complexity of shareholder structure.
    - For example, options should include options for mechanism to create a level of certainty for recovering the capital ~~money~~ provided to OPG ~~no matter if~~whether this is done as common equity or through other mechanisms, including the potential use~~d~~ of preferred shares.~~as 'equity injection' for the purpose of the GA deferral proposal.~~
- Under the current state of discussion, t~~T~~he capital contribution ~~equity injection~~ would~~ill~~ be provided on a monthly/quarterly basis to OPG by the Province.
- The capital contribution ~~equity injection~~ results in the Province, the sole shareholder of OPG receiving common shares, or another type of security, from OPG whose valuation is based on a determined and agreed upon methodology. The Province will require an internal discussion before proceeding with a dialogue with OPG on the details.
- This methodology can be as simple as book value or can be based on some ~~kind~~ form of a discounted cash flow (DCF) mechanism but TD's expertise in structuring deals is sought in this request [keeping in mind the first bullet above].
- Given the time limited nature of the capital contribution ~~equity injection~~ the Province would anticipate~~s~~ repayment at a future date.
- The potential for repayment can be implemented as follows:
    - The Province as the sole shareholder~~, as well as having vested legislative authority~~, can require OPG to issue dividends annually.
- The shares issues by OPG can include some ~~kind~~ form of optionality to be exercised by the Province as and when repayment is ~~required~~due under the GA deferral plan. The nature of the repayment should be flexible enough to request payment at a much earlier date than anticipated, ~~given the potentiality of a new government's different policies subsequent to future elections~~with any number of possible causes, e.g. changes in government policy.

Commented [1]:
I suggest we delete this and have TD opine on options.

- ~~OPG c~~Could~~an~~ the structure involve issuing~~e preference~~ preferred shares ~~again~~ with some ~~kind~~ form of optionality for repayment. Preferredence shares, especially those with a specified annual dividend schedule could potentially~~will~~ ensure that the Province remain~~s~~ whole in terms of the incremental interest costs it would incur~~s~~ on the ~~equity injection~~capital contribution.

- Other factors to be considered for repayment:
  - Should the senior and subordinated debt be ranked as the same and if so does this impact market access
  - Should the senior debt be repaid first or should repayment be on a pari-passu basis
  - OPG may have concerns about their own credit rating if the number of shares issued to the Province substantially dilutes key ratios.
  - Eventually, the Province would need to have a discussion with OPG on the path forward.

Commented [2]:
Not sure if this is needed here.

Summarizing Issues to Work Around [Pls. Add More CMD and FTD]

- The Province will need to consider various levels of options for certainty in being able to recover its capital ~~getting the money back,~~ as stipulated in the GA deferral plan.
- The Province needs to be kept whole with respect to any financial cost that may arise from making and carrying forward the capital contributions.
- For regulatory purposes, there may be an interest in insuring that the capital contributions ~~equity injection is~~are considered a true equity in OPG's capital structure [TBD but still require consideration].
- The plan require that OPG operates on a commercial basis for the SPV with its Board needing to make independent decisions[, thus the need to have a discussion].
- In order to ensure continued treatment of OPG as a government business enterprise (GBE), the Province would want to avoid the appearance of providing zero or low interest loan.

From:	John Kim
To:	Ken Kandeepan; Mike Manning
Cc:	Francisco Chinchon; Carlos Yep; Bruno Amara; John Psinas; James Devine
Subject:	TDS_v3.docx
Date:	Friday, April 21, 2017 11:48:20 AM
Attachments:	TDS_v3.docx

Hi Ken, Mike,

Let me know if this works.

I'm on the fence about the last bullet I added.

Thanks,

John

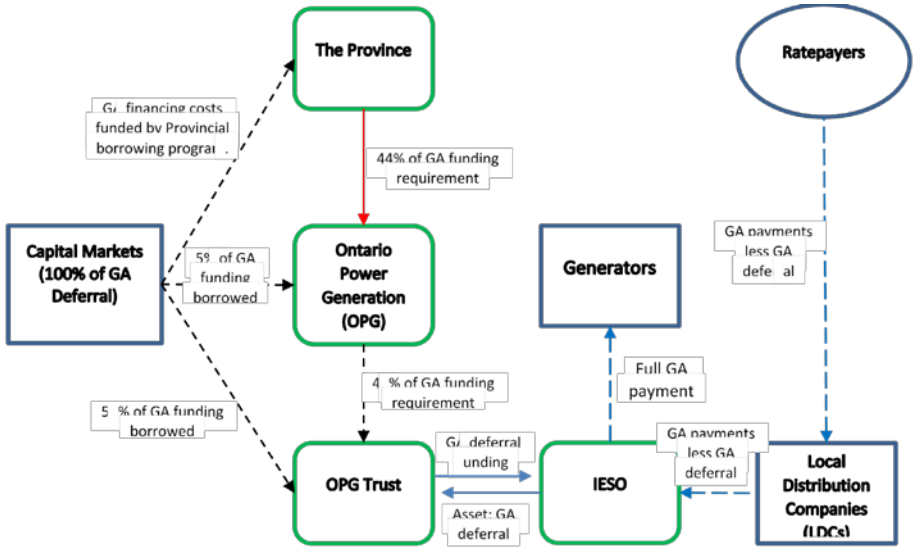
GA FINANCING – TD'S ADVICE SOUGHT ON CAPITAL CONTRIBUTION MECHANISM

The Capital Markets Division of the Ontario Financing Authority require TD advisors' recommendations and detailed descriptions of options vis-à-vis the proposal to provide capital ~~equity injection~~ to the Global Adjustment (GA) deferral proposal as part of the larger Ontario's Fair Hydro Plan, as announced on March 2, 2017.

Context

The Ministry of Energy, Ministry of Finance and the Ontario Financing Authority (OFA) are coordinating with OPG to implement a Global Adjustment (GA) smoothing mechanism.

Under the current proposal, OPG would develop a Special Purpose Vehicle (SPV) referred to as "OPG Trust" which will use 100% debt financing to purchase regulatory assets from the IESO. These regulatory assets represent the portion of RPP GA expenses recovery deferred to future years. IESO would use the cash from the OPG Trust to make up the shortfall in GA recoveries from ratepayers versus the cost of full payment to~~in order to fully compensate~~ generators.



OPG Trust would finance 51% of its funding requirements through the capital markets as senior debt with the remaining 49% being provided by OPG as subordinated debt. The 49% subordinated debt from OPG will be financed through debt OPG issues in its own corporate capacity, from the capital markets (5%) and through equity injections from the Province (44%). The Province will finance its capital

contributions ~~equity injection~~ through its annual borrowing program - from issuing debt into the capital markets.

Options for Equity Injection from TD Securities

The advice sought from TD could be summarized as follows:

When developing options for structuring the capital contributions ~~equity injection~~ from the Province to OPG for the~~amounting to~~ 44% of the ~~debt incurred~~financing requirement ~~-~~by the OPG Trust ~~set up~~ to purchase the regulatory asset from IESO, a number of ~~the following~~ underlying principles need to be addressed.

- While the Province is a sole shareholder of OPG, advice is sought to address potentially higher degrees of complexity of shareholder structure.
    - For example, options should include options for mechanism to create a level of certainty for recovering the capital ~~money~~ provided to OPG ~~no matter if~~whether this is done as common equity or through other mechanisms, including the potential use~~d~~ of preferred shares.~~as 'equity injection' for the purpose of the GA deferral proposal.~~
- Under the current state of discussion, t~~T~~he capital contribution ~~equity injection~~ would~~ill~~ be provided on a monthly/quarterly basis to OPG by the Province.
- The capital contribution ~~equity injection~~ results in the Province, the sole shareholder of OPG receiving common shares, or another type of security, from OPG whose valuation is based on a determined and agreed upon methodology. The Province will require an internal discussion before proceeding with a dialogue with OPG on the details.
- This methodology can be as simple as book value or can be based on some ~~kind~~ form of a discounted cash flow (DCF) mechanism but TD's expertise in structuring deals is sought in this request [keeping in mind the first bullet above].
- Given the time limited nature of the capital contribution ~~equity injection~~ the Province would anticipate~~s~~ repayment at a future date.
- The potential for repayment can be implemented as follows:
    - The Province as the sole shareholder~~, as well as having vested legislative authority~~, can require OPG to issue dividends annually.
- The shares issues by OPG can include some ~~kind~~ form of optionality to be exercised by the Province as and when repayment is ~~required~~due under the GA deferral plan. The nature of the repayment should be flexible enough to request payment at a much earlier date than anticipated, ~~given the potentiality of a new government's different policies subsequent to future elections~~with any number of possible causes, e.g. changes in government policy.

Commented [1]:
I suggest we delete this and have TD opine on options.

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- In order to ensure continued treatment of OPG as a government business enterprise (GBE), the Province would want to avoid the appearance of providing zero or low interest loan.

From: Thom, Trevor
To: Steen Hume (CAB)
Cc: Mike Manning
Subject: Today"s meeting
Date: Monday, April 03, 2017 10:17:23 AM

Can you please provide a dial-in/conference call details. 1-2 of us will attend in person, but other team members would like to dial in. Thx.

Regards,

Trevor
Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
trevor.thom@tdsecurities.com

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From:	Mike Manning
To:	Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc:	James Devine; Carlos Yep
Subject:	Tomorrow"s meetings
Date:	Tuesday, March 28, 2017 9:14:19 AM

Hi Guys:

Always challenging to arrange meetings, so will give you the current schedule which differs a bit from yesterday's:

- 11:00 Scotia
- 1:00 BMO
- 1:30 TD
- 2:00 Recap & selection

Sorry for the changes. I'm hoping that these times work for everyone. Let me know if thre is a problem.

Thanks, Mike

From: Thom, Trevor
To: Mike Manning
Subject: Tomorrow
Date: Tuesday, March 28, 2017 10:37:13 AM

Mike,

Attending from TD tomorrow:

Trevor Thom – MD & Head, Government Finance

Mike Wolff – MD & Head, Customized Solutions

Harold Holloway MD & Head, Power & Utilities Investment Banking

David Manii – Director, Corporate Banking

Brad Purkis – MD, Asset Securitization

Vy Doan – VP, Government Finance

Regards,

Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
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From: Mike Manning
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: Mike Manning
Subject: Wednesday meetings
Date: Monday, March 27, 2017 12:29:09 PM

Hi Guys:
I've arranged for 3 dealer meetings and a follow-up selection meeting as follows:
1:30 TD
2:00 Scotia
2:30 BMO
3:00 Selection Mtg

All meetings will be held at the OFA (1 Dundas Street West 14 th floor) in the Capital Markets Boardroom.
I look forward to seeing you both then. My number is 416 325 8930 and I will let you in when you arrive. Please let me know if these times work. The dealers are still confirming, so could have some changes. There is some flexibility if these times are problematic.

Mike

From: Mike Manning
To: Scott Nelms (ENERGY); ASHBOURNE, STEPHEN
Cc: Mike Manning
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Date: Monday, March 27, 2017 12:29:09 PM

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Mike

From: Thom, Trevor
To: Mike Manning
Subject: hi - are you going to send that email?
Date: Monday, March 27, 2017 11:16:46 AM

Regards,
Trevor

Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
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From: Thom, Trevor
To: Mike Manning
Subject: just tried you. no rush. early Tuesday afternoon for a meeting next week with the TD team?
Date: Friday, March 31, 2017 8:57:21 AM

Regards,

Trevor
Trevor Thom
Managing Director and Group Head, Government Finance | TD Securities
Ernst & Young Tower, 222 Bay Street - 7th Floor
Toronto, ON, Canada M5K 1A2
P: (416) 982-2788 | C: (647) 262-8584
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