

Memorandum

Highly Confidential

To: BOARD OF DIRECTORS
of the Independent Electricity System Operator

From: Bruce B. Campbell, President & CEO

Date: April ~~31~~, 2017 (for the April 12, 2017 Board Meeting)

Re: **President's Report to the Board**

The following notes for my President's Report identify emerging / strategic issues followed by updates on regular matters of interest.

A. EMERGING / STRATEGIC ISSUES

Fair Hydro Plan Implementation

With the Ontario government announcement of the Fair Hydro Plan on March 2nd, the IESO has been significantly involved in the ongoing implementation work. This involves various ministries, OPG, the OEB and others – including external legal and accounting advisors. Kim Marshall is managing the IESO input into this effort, assisted in particular by our legal, settlements, treasury and corporate controller functions. At this point the key issues revolve around the creation of the deferral amounts as a regulatory asset, capable of being purchased by a financing entity with no recourse to IESO once divested; and clarity that the IESO should have no future liability related to any shortfall in the collection of the deferral amount, as well as drafting the necessary legislation. There will be an update on progress at the Audit Committee meeting and for the Board.

managing call centre services; and program design. Our costs associated with this work will be paid by MOECC-administered cap and trade funds. The current arrangements run through to the end of February, 2018.

Quebec Interties

There is continued interest from the Ontario and Quebec governments, through their respective ministries, in understanding and assessing the capabilities of the Ontario/Quebec interties. We have provided the Ministry of Energy with technical analysis from the Ontario perspective, as has Quebec Hydro on its side.

Filings

The IESO Annual Report, including our audited financial statements, was filed with the Minister on March 31, 2017, and has been posted on our website and to the IESO Resource Centre on Boardbooks.

The financial statements incorporate the IESO's recent change in accounting policies approved by the Audit Committee on March 15, 2017. Kim Marshall has arranged to meet the AG to advise her of those amendments.

The IESO's 2017-2019 Business Plan was approved by the Minister by letter dated March 21, 2017. This clears the way for our OEB filing, anticipated for mid- to late-April 2017.

CURRENT UPDATES

IESO Executive Briefing on Cybersecurity

We are in the process of planning our third executive briefing on cybersecurity. This event will be taking place in Toronto in late September 2017. Consistent with the objectives of the 2 previous briefings, we will be looking to enhance sector awareness around cybersecurity risks, continue to encourage the need for information sharing and present best practice guides in 3 key areas of cybersecurity threats. Themes for the day will include power system resiliency, Board governance with respect to cybersecurity, cybersecurity in academic curricula including workforce development, market participant showcase, and the inside threat.

Smart Metering Entity

The Smart Metering Entity (SME) and the Local Distribution Companies (LDCs) have been making progress on the additional data collection requirement over the last few months (6 digit postal codes, distributor rate class, commodity rate class and occupant change date generalized at yearly level) with most LDCs now complying with the Ontario Energy Board (OEB) Order and a data collection status of over 99%.

With the additional data collection essentially completed, the SME is now focusing on the next requirement of the OEB Order, being the development of third party access to the enhanced data. As a first step, a new governance model is being designed which includes a new SME Data Strategy Advisory Council to collect broad input from a number of interested audiences across the province, consistent with our stakeholdering principles. The membership of the Advisory Council will cover LDCs, third party representatives, various experts (data scientist, ethics advisor, etc.) and observers (OEB, Ministry of Energy, Electricity Distributors Association) and is being selected through an open call for nominations.

The SME also continues to actively participate in the Net Metering/Self-Consumption Advisory Working Group¹, with discussions including the issue of virtual net metering and third party ownership, including costing considerations.

The Toronto Hydro integration project which is targeting a Q4 2017 implementation date has been initiated with a detailed project plan.

Grid/LDC Coordination Initiative

Since last spring we have been working with Powerstream (now part of ~~ALECTRA~~Alectra) to help evaluate the POWER.HOUSE Pilot program and address Grid-LDC Interoperability. To date an interoperability and data sharing framework has been developed, and Operations has started to share operational and forecast data with Alectra. In addition, we have established an ongoing Grid-LDC Interoperability Standing Committee comprised of LDC and sector representatives – a more detailed update is planned for the June Board meeting.

¹ The Net Metering/Self-Consumption Advisory Working Group of the Ministry of Energy was established in July 2015, to help build the program design for net metering in Ontario. Thus far, the SME has provided input into a high level cost benefit analysis, which includes assumptions for using the MDM/R to collect net metering data for Ontario. According to the Ministry of Energy, this project is expected to ramp up in 2017 with program completion currently targeted for 2018.

Capacity Exports

The New York Independent System Operator (NYISO) held an installed capacity (ICAP) auction on March 30/31, 2017 with results to be posted on April 4, 2017. Two Ontario market participants, OPG - Beck (for 128 MW) and Northland Power – Kingston Cogen (for 113 MW), sought permission from the IESO to participate in the NYISO ICAP auction for the summer period (May – October 2017).

More specifically, NYISO allocated 128 MW of external ICAP to Ontario, up from 89 MW last year. The IESO's latest 18-Month Outlook shows that under extreme weather conditions Ontario could face some resource adequacy challenges during this June, July, and August. Therefore, OPG was approved to participate in NYISO's monthly ICAP auctions for this May, September and October only. Northland Power was approved to participate for all 6 months because the IESO's resource adequacy assessment does not rely on unregulated/un-contracted supply.

This is the first time an Ontario merchant facility is participating in an external installed capacity (ICAP) auction. Finding opportunities for market participants to earn revenue by exporting generation capacity not required for Ontario's reliability requirements is one of the objectives of the Capacity Exports initiative.

Regulatory

Last year, Ontario Power Generation (OPG) filed with the Ontario Energy Board (OEB) its application for 2017-2021 payment amounts for its regulated hydroelectric and nuclear generating facilities, with a focus on the Darlington Refurbishment Program and Pickering Life Extension. An IESO cost-benefit analysis, completed by request of the government in March and October of 2015, was included in the evidence for Pickering Life Extension.

This case has now reached the oral hearing stage. Andrew Pietrewicz, Director of Resource Integration, was the IESO witness at the hearing. The scope of the IESO's oral evidence was limited to the filed written evidence (e.g. the 2015 analyses) and the assumptions made at that time, underpinning the IESO's cost-benefit analysis. To date, intervenors' interest in the IESO's evidence is to suggest that, with today's information, there is no longer a net benefit to the extended operations at Pickering.

Whole Home Program Update

As per the directive received from the Minister of Energy in June 2016, the IESO is working with gas utilities to develop a Whole Home pilot program that would integrate electricity efficiency measures into Enbridge and Union Gas' existing offerings. The program will address the need for a one-window, one service provider multi-fuel energy efficiency program. Customers will be offered incentives for retrofits/equipment upgrades through participation in home energy audits. The Conservation First Framework (CFF) will fund new electricity measures (e.g. air conditioners, appliances, education) in non-electrically heated homes and all measures (insulation, air sealing) in electrically-heated homes. The program is expected to be made available to customers next month and will include approximately 22,000 households by the end of 2017.

Mid-Term Review Update

The IESO has initiated the mid-term review of the Conservation First Framework (CFF) and Industrial Accelerator Program (IAP) for transmission-connected customers, including a formal engagement process and establishing the Conservation Framework Mid-Term Advisory Group. The Advisory Group had its initial meeting in February 2017 and asked the IESO to undertake a comprehensive assessment of how Conservation and Demand Management (CDM) should be defined. The Advisory Group will continue to meet monthly to provide input into the review, including the 8 key substantive areas² to be covered by the review. A broader engagement process will also begin later this month.

Q4 2016 Conservation Results

The quarterly progress report on the Conservation First Framework (CFF) was provided to the Minister of Energy on March 22, 2017. Allowing for reporting lags, the program is assessed as being on track to meet the 2020 targets.

² Namely, (1) targets/budgets; (2) lessons learned on LDC funding models; (3) customer needs; (4) program effectiveness (including LDC and IESO services); (5) conservation integration with regional planning; (6) Conservation First Framework alignment with Climate Change Action Plan initiatives; (7) post-2020 approaches to energy efficiency; and (8) definition of conservation (what resources/technologies are considered eligible within the framework).

Brant Area Demand Response (DR) Pilot

This pilot project was undertaken to evaluate the potential for demand response (DR) to address local needs. Although it attracted interest, we did not receive any submissions to the RFP. Preliminary feedback from proponents indicates that developing a demand response (DR) project that would be limited to the small Brant area load pocket and that would meet the minimum size requirements of the RFP (1MW) was a challenge, particularly given the limited time the RFP provided for developing projects. The IESO project team intends to seek further feedback from proponents and stakeholders to further its learnings on developing processes for non-wires alternatives. This pilot initiative was structured as two RFPs: one RFP in 2016 for 2017 service and another RFP in 2017 for 2018 service (to give proponents that were not ready for 2017 an opportunity in 2018). As such, there is an opportunity to obtain further stakeholder input and refine the RFP for 2018 service.

Transmission Procurement

Work continues toward recommending two initial projects: (i) Milton SS upgrade/new line to Hurontario SS; and (ii) Dryden TS static VAR compensators. We anticipate that the IESO transmission procurement role will be addressed in the Long-Term Energy Plan (LTEP). These projects could then become part of the LTEP Implementation Plan and proceed under the new transmission procurement authority – with the possibility that transmission stakeholdering would commence in late 2017, followed by transmission procurement starting in mid-2018. Our planners are reviewing project in-service needs to determine whether these timelines can be accommodated. Initial discussions are also underway with the Ontario Energy Board on section 92 (leave to construct) application process refinements for new transmission projects.

Ministry Briefings

We continue to engage with the government on a number of active files and evolving initiatives, including:

<i>Market Renewal</i>	<i>Long-Term Energy Plan</i>	<i>Rate Mitigation</i>
<i>Quebec & Newfoundland Electricity Trade</i>	<i>Cap and Trade & Green Bank</i>	<i>Conservation First Implementation and Industrial Accelerator Program</i>
<i>Non-Utility Generators</i>	<i>Demand Response</i>	<i>Renewables – FIT, microFIT/ net metering</i>

<i>Transmission Procurement</i>	<i>High-Voltage Transmission System including NW Bulk Transmission Line</i>	<i>Energy Storage</i>
<i>Regional Planning</i>	<i>18-Month Outlook</i>	

Outreach Activities

- CEO Round Table re Market Renewal, April 27, 2017
- CAMPUT, May 7-10, 2017
- Energy Law Forum, May 10-12, 2017
- IRC Joint Board Meeting, Washington, May 23-25, 2017
- Town Hall, June 19, 2017
- Smart Grid Forum, June 20, 2017