

CanSIA Submission re: Ontario Planning Outlook

1. Introduction

CanSIA is a national trade association that represents the solar energy industry throughout Canada. CanSIA's vision for Canada's solar energy industry is for solar electricity to be a mainstream energy source and an integral part of Canada's diversified electricity mix by 2020. CanSIA also intends for the solar electricity industry to be sustainable, with no direct subsidies, and operating in a supportive and stable policy and regulatory environment within a similar time frame.

CanSIA appreciates the ability to provide feedback on the Independent Electricity System Operator's (IESO) forthcoming Ontario Planning Outlook (OPO). This submission contains questions regarding the information presented within the presentation delivered by the IESO at the March 23, 2016 Stakeholder Advisory Committee meeting. This submission also contains suggestions for additional information and data points which CanSIA believes would be valuable to include within the OPO.

2. Recommendations

2.1 Regional Planning and Local Needs Identification

The presentation delivered by the IESO at the March 23, 2016 Stakeholder Advisory Committee (SAC) meeting focuses almost entirely on the provincial level/bulk transmission system in regards to supply adequacy analysis. Allusion is made, however, to regionally specific supply needs that have arisen (and will continue to arise) in certain areas of the province that are to be addressed through the regional planning process.

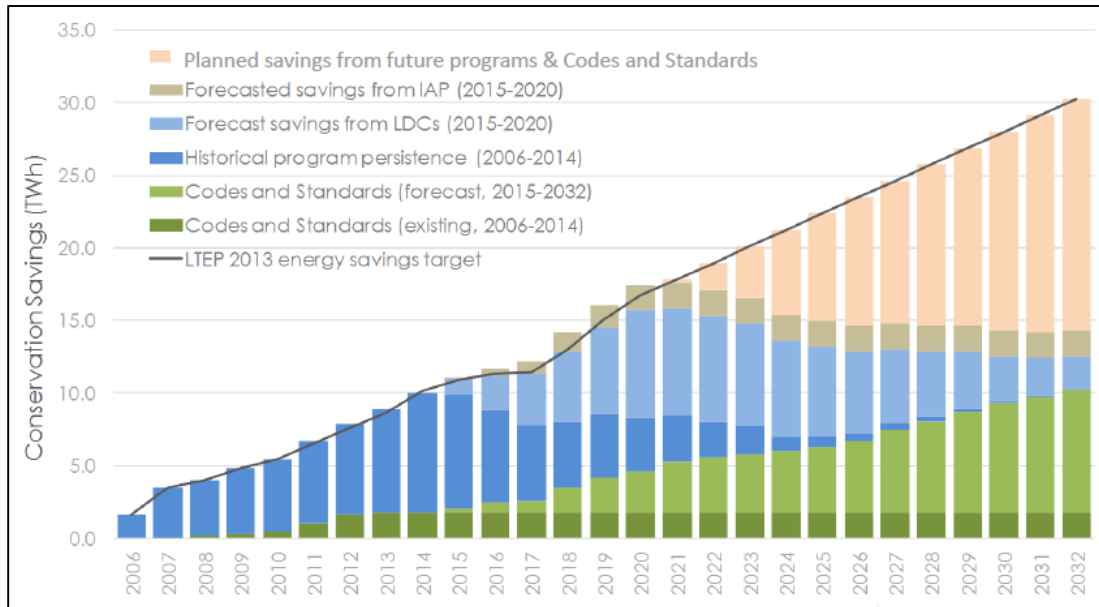
Insight into the local avoided transmission, distribution, and generation costs in different areas of the province should be included in the Ontario Planning Outlook to better define the value case for alternative solutions to meeting regional electricity needs. Specifically, this would provide the starting point for a discussion of how distributed energy resources (DERs) and conservation and demand management (CDM) can play a larger role in the future within regional planning. If regional supply needs are expected to materialize during the effective term of the forthcoming Long Term Energy Plan (LTEP), both the OPO and the LTEP should speak to how those needs can be addressed using solutions other than the construction of additional transmission and distribution infrastructure.

2.2 Conservation Targets

The OPO should include a detailed risk assessment on conservation targets being met. While this is identified as a risk in the IESO's presentation, the extent and impact of that risk should be further detailed. For example, the OPO should incorporate Ontario Energy Board verified results of existing conservation programs and a forward looking assessment of the ability of currently planned (and future

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undefined programs) to fulfill the forecasted energy savings. Specifically, the risk assessment should cover the “Planned savings from future programs & Codes and Standards” and “Forecast savings from LDCs (2015-2020)” identified in the chart below.



This information can be used during the LTEP consultations to better contextualize and define one of the risks to supply adequacy but also to inform how the IESO, LDCs, Ministry of Energy, OEB and industry can work together to ensure that the forecasted savings from future programs are achieved. Behind-the-meter and virtual net metering distributed solar generation (DSG) installations support the province’s Conservation First policy and help LDCs to meet CDM targets. Behind-the-meter DSG can effectively lower the electricity demand of consumers throughout the day, especially during peak periods. The 2014 Distributor Scorecard published by the OEB shows that only 6 of 72 LDCs (8%) have met their Net Annual Peak Demand Savings target, and only 41 of 72 LDCs (57%) have met their Net Annual Energy Savings target. DSG can be an effective option for LDCs to meet their CDM targets while at the same time aligning the interests of LDCs and customer-driven DSG.

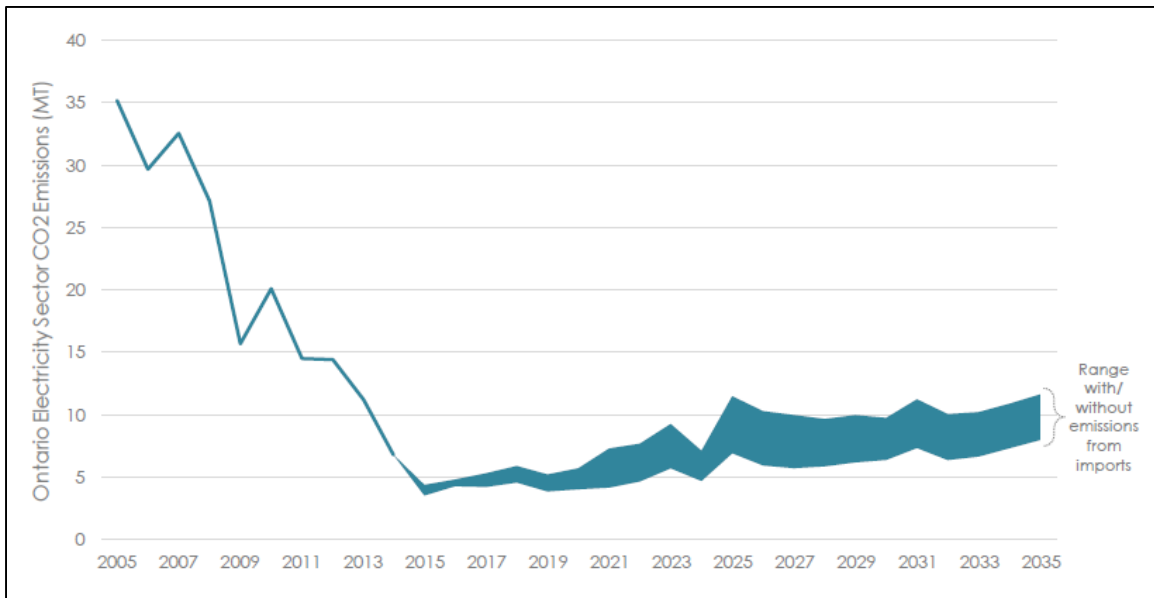
DSG and net metered generation can help to drive interest in CDM participation by Ontario’s electricity consumers. Customers receiving excess generation payments (i.e. payments for surplus power export to the grid) will be incentivized to conserve and manage their demand to increase revenue from grid export. Through a net metering program, the majority of funding for a behind-the-meter DSG project will be realized from on-site avoided electricity savings, reducing the impact to already committed CDM budgets if they were made available to support DSG development.

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2.3 Cost of Carbon and GHG Emission Forecasts

In the 2015 Climate Change Strategy the MOECC identified specifically that it will establish GHG reductions as a priority in the next Long Term Energy Plan and that it will ensure a continuation of the positive trends in the electricity sector as well as continued improvement in conservation, efficiency and clean energy use to achieve deeper, long term GHG emission reductions.

Uncertainty exists across the electricity sector in regards to how emissions will change over the initial compliance period of the Cap and Trade system. For example, the 2013 LTEP forecasts meeting a prescribed target for conservation of 7 TWh by 2020. Meeting those targets (or not meeting them) has implications for energy production in the province and thus the GHG profile of the electricity sector. Local Distribution Companies (LDCs) have already begun signaling possible difficulties in meeting conservation targets using the usual energy efficiency measures available to them. For this reason some LDCs have funded behind the meter natural gas generation as a method of conservation. Meeting the conservation targets with behind the meter natural gas generation will increase GHG emissions. Ontario may also require additional renewable resources such as distributed solar to supply emissions free electricity to meet any increase in demand from the electrification of other economic sectors and to avoid IESO forecasted increases to GHG emissions from the electricity sector as a result of increased reliance on natural gas generation for meeting conservation targets and during periods of nuclear refurbishment. The IESO's figure, below, forecasts current analysis on emissions increases from the electricity sector.



Included within the OPO should be an assessment of cost of meeting supply adequacy targets given increasing natural gas costs. A forecast of increasing natural gas costs due to the Cap and Trade

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regulation will be important both to understand the impacts of increased reliance on natural gas to meet conservation targets, to provide supply and operability services during the period of nuclear refurbishment, and in regards to the possible re-contracting of end of life natural gas contracts in the mid-2020s.

Also in regards to GHG emission, the OPO should include a scenario analysis of the GHG emission impacts from the more impactful supply risks that have been identified, namely: schedule or cost overruns of nuclear refurbishment, the potential of Pickering GS not operating to 2024, and not meeting conservation targets (or meeting them with behind the meter natural gas).

2.4 Assumption Transparency

During the March 23, 2016 SAC meeting, IESO planners identified that many of the assumptions utilized in their analysis would be included within the OPA (though they have not been presented thus far). Having the ability to view the technical report and the assumptions that go into the analysis would be very valuable and allow the generator industries (and other interested stakeholders) to ensure that the IESO is using up to date information for forward looking assessments of cost, performance and operability of their technologies rather than information from existing (i.e. historical) facilities as was utilized for the Large Renewable Procurement (LRP) when determining annual capacity factors and system value constants.

3. Conclusion

The IESO has made efforts to identify a number of different risks to supply adequacy at the provincial level within their initial presentation on the OPO. In order to ensure that the final OPO includes all information necessary to consult with electricity stakeholders through the LTEP process, CanSIA has included recommended that the IESO ensure the OPO:

- Include information on the local avoided transmission, distribution, and generation costs in different areas of the province to better define the value case for alternative solutions to meeting regional electricity needs;
- Include a detailed risk assessment on conservation targets being met and a forward looking assessment of the ability of currently planned (and future undefined programs) to fulfill the forecasted energy savings;
- Include an assessment of the cost of meeting supply adequacy targets given increasing natural gas costs;
- Include a scenario analysis of the GHG emission impacts from the more impactful supply risks that have been identified, namely: schedule or cost overruns of nuclear refurbishment, the potential of Pickering GS not operating to 2024, and not meeting conservation targets (or meeting them with behind the meter natural gas); and

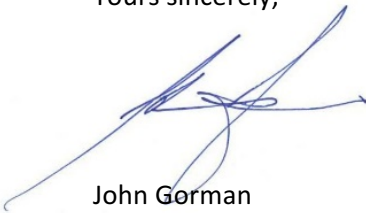
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- Provide the ability to view the technical report and the assumptions that go into the analysis to allow generator industries (and other interested stakeholders) to ensure that the IESO is using up to date information for forward looking assessments of cost, performance and operability of their technologies.

With the risks that have been identified by the IESO and the wide variety of impacts that could occur from other changing market conditions, Ontario needs to fully understand the severity and likelihood of risks and ensure that there are flexible and adaptive solutions available to meet them. Solar can contribute to meeting CDM targets, reduces the use of natural gas for peaking purposes, contributes to lowering the impact of Cap and Trade on the cost of electricity, and is widely supported by members of the public in comparison to other generation technologies.

Thank you again for the opportunity to provide input into the OPO/LTEP Process.

Yours sincerely,



John Gorman

President & CEO, Canadian Solar Industries Association