

Long Term Energy Plan Scope

1. Introduction

The Canadian Solar Industries Association (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 to be a mainstream energy source and an integral part of Canada's diversified supply mix by 2020. CanSIA also intends for the solar energy 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 thanks the Minister of Energy for the opportunity to provide scoping comments with regards to the forthcoming Long Term Energy Plan (LTEP).

The Ontario solar industry is reaching a transition point in its development that is punctuated by the ending of the long standing Feed-in Tariff (FIT) Program, the introduction of the Cap and Trade program and associated Climate Change Action Plan (CCAP), and the expanding focus on moving towards a more distributed and intelligent electricity grid. The comments below reflect CanSIA's preliminary commentary with regards to how the scope of the LTEP can address this transition point and ensure that the long term framework for solar energy is supportive and stable. CanSIA looks forward to continuing this dialogue with the Ministry of Energy throughout the LTEP process.

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2.1 Transitioning the Distributed Solar Generation Industry

As detailed in CanSIA's Distributed Generation Task Force (DGTf) Recommendation Report, the scope of the LTEP should address how to effectively transition the distributed solar generation (DSG) industry away from the current Feed-in Tariff (FIT) regime and into a stable net metering based framework. This transition, and the resultant framework, is envisioned by CanSIA to be more responsive to electricity customer demand and to shift investment and performance risk to the market. Making this transition will allow the private sector to design and deliver projects efficiently within a timeline driven by economics and investment decisions rather than centralized procurement cycles. Managing this transition includes three main mechanisms, described below.

2.1.1 Utilizing the existing FIT Program During Transition

The DSG industry has continued to invest in Ontario due to the stability that was provided by the Minister's Directive in 2013 for the procurement of 900 MW of FIT over a number of years, and the FIT program as a whole. These commitments should be actioned in full. Completing the FIT 5 and FIT 6 procurements provides stability for continued investment in Ontario's solar electricity industry while the transition to a net metering program is developed and implemented. A number of regulatory, policy,

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operational and IT infrastructure changes must be made in order to effectively transition the industry away from centralized procurement processes. For example, Time of Use (TOU) based compensation must be enabled by legislation/regulation, data transfer and management systems like the MDMR must be upgraded to allow TOU billing, and a stable transitional support policy must be developed and put in place. While these changes are occurring, FIT 5 and 6 will continue to support investment in the distributed solar industry. Continued procurement for the last two rounds of the FIT program will also help to manage continuing reductions in DSG costs and ensure that the government hits its pre-existing target of 10,700 MW of non-hydro renewables in service.

2.1.2 Net Metering Regulation and Enabling Legislation

The Ministry of Energy's Net Metering/Self-Consumption Advisory Working Group (AWG) has made great strides in developing revisions to Ontario's existing net metering regulation. While the AWG's work continues, they have identified three main areas where further consultation is required before revisions are made or settlement practices are updated. These areas are the implementation of TOU rates for net metered customers, and eligibility of third party ownership (TPO) and community solar models. The scope of the LTEP should address these areas to ensure their outcome is aligned with the overarching goals of expanding customer choice, providing value to the electricity system and customers, and reducing the cost solar electricity.

2.1.3 Transitional Support Policy

As the FIT and microFIT Programs begin the process of completing their currently directed procurement targets, the scope of the LTEP should address how to transition away from these programs in a managed and structured way. As detailed by CanSIA's DGTF, the industry preferred mechanism for effecting this transition is through the establishing of a time bound, declining, capital cost incentive beginning at ¢50/watt in 2018 and dropping to ¢2/watt in 2022. CanSIA's recommendations in this regard are structured as an off-ramp from the current centralized FIT and microFIT procurement programs. They seek a reasonable balance between ratepayer protection and continued modest and steadily declining support for solar's participation in the supply mix. They harness a Conservation First approach in order to bend the cost curve for ratepayers. Ontario's evolution from FIT through supported net metering to a customer self-consumption model allows for the Province to capture the full value of being an early champion of renewable energy. This balanced approach ensures that Ontario continues to have the support mechanisms and a regulatory environment necessary to enable enhanced energy services for customers and advance toward a collective smart grid future.

2.2 Focussing on Regulatory Modernization

Ontario's electricity sector is evolving in ways that challenge the business models of traditional electricity system stakeholders. Distributor revenue decoupling from electricity sales and the OEB's Renewed Regulatory Framework (RRF) fundamentally change the investment incentives and risks facing

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Local Distribution Companies (LDC). LDCs are also expected to deliver the province's Conservation First framework and to connect increasing amounts of distributed generation. These changes challenge stakeholders to find new paths forward. The scope of the LTEP should directly address issue of regulatory modernization in Ontario to review and implement best practices being adopted in other jurisdictions.

The regulatory structure needs to evolve over time to incent LDCs to meet customer's evolving needs and desires, including the ability to manage their usage and make use of DSG and other Distributed Energy Resources (DER). Regulatory restructuring processes, such as New York's REV, have important lessons for Ontario in this regard and the recent Track 2 Order, released on May 19, 2016 should be examined closely by the Ministry of Energy. This order sets out the framework for moving utilities off of fixed charges and old methods of recovering revenue and instead refocussing utilities on becoming distribution service providers that recover larger portions of their revenue from services they can offer to DER providers and customers. Similarly, the California ISO recently received FERC approval to allow aggregated DERs to participate in wholesale markets. As third parties begin offering new technologies and services to consumers, LDCs and the IESO will be required to approach system planning and operations very differently than in the past. Facilitating customer choice in services such as DSG and other DERs creates the ability for customers to respond to market signals and support distribution system needs. Underlying electricity rate, LDC compensation structures, and market rules must also evolve to facilitate this transition.

2.3 Addressing Barriers to Reaching Grid Parity

The cost of solar has fallen sharply in the last decade in Canada. This can be attributed primarily to a drop in the cost of modules but also to declines in costs associated with an industry of larger scale and predictable structure – such as customer acquisition, installation labour, utilization efficiency, and financing. Solar costs in Canada have been dropping for four decades, but this decline accelerated rapidly in the last 8 years. During these years the installed capacity of solar has increased, driving recent cost declines in the face of stabilizing module prices. While still appreciable, recent reductions in soft costs linked to economies of scale haven't been as pronounced as in jurisdictions with even larger and more evolved markets like California and New York; there is still room for gains in Ontario.

The scope of the LTEP should set up processes to analyze and address barriers to the increased adoption of solar energy in Ontario in order to continue to make progress towards achieving grid parity in the province. Specifically, the scope of the LTEP should address connection processes and requirements, connection costs, and connection barriers (such as restrictions on the maximum amount of DSG that can be connected to a feeder).

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2.4 Planning for the Impacts of Climate Change Policy

Climate change policy is entering a new phase on the provincial, federal and global stages that will have a direct impact on the Ontario economy and electricity system. At the provincial level, the Ontario government has committed to reducing Greenhouse Gas Emissions (GHG) by implementing a Cap and Trade program in 2017. At the federal level, the new government has committed to taking action on climate change, working with provinces and territories to place a price on carbon and reduce carbon emissions. Canada is also taking action at the global level by committing to the climate change agreement adopted at the Paris Climate Conference (COP 21). Meeting these goals will involve significant changes in global energy consumption and investment.

In the 2015 Climate Change Strategy the government of Ontario identified specifically that it would establish GHG reductions as a priority in the next LTEP 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. In the 2016 Climate Change Action Plan the government signalled that it would plan for increased electricity demand as a result measures such as the electrification of transportation and space and water heating. The scope of the LTEP should address how this goal will be accomplished in a manner that does not contribute to increasing GHG emissions from the electricity sector.

Ontario may also require additional renewable resources such as DSG 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 (through behind the meter natural gas generators) and during periods of nuclear refurbishment.

The scope of the LTEP should also include 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 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, to meet increases in electricity demand from climate policies, and in regards to the possible re-contracting of end of life natural gas contracts in the mid-2020s. Beyond simply cost, the scope of the LTEP should also include a scenario analysis of the resultant GHG emission impacts from using natural gas to address the more impactful supply risks that have been identified. This analysis should factor into the LTEP's goal of not contributing to increasing GHG emissions from the electricity sector.

With regards to the use of natural gas for space and water heating, the scope of the LTEP should assess and plan for the impacts of the Cap and Trade program and CCAP on planned expansions of natural gas infrastructure. Solar thermal technologies can help lessen natural gas use in homes and buildings for both space and water heating and should be considered in light of the increasing cost of carbon over time.

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2.5 Expanding the Scope of Regional Planning

The regional planning process is intended to ensure a reliable supply of electricity to Ontario's electrical regions. Ostensibly the process considers conservation, generation, transmission and distribution and innovative resources to do so and to provide the crucial link between provincial and local planning. Thus far, however, the regional planning process has only resulted in the implementation of transmission and distribution system expansions in order to meet changing regional needs.

The scope of the LTEP should include insight into 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. Specifically, this would provide the starting point for a discussion of how DSG and other DERs and conservation and demand management 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 LTEP, the scope of the LTEP should speak to how those needs can be addressed using solutions other than the construction of additional transmission and distribution infrastructure. The scope should also include revisions to procurement processes (existing and new) that could support targeted uptake of these alternative resources to meet these regional needs.

2.6 Ensuring Market Renewal Initiatives Support Renewables

In March of 2016 the IESO initiated market renewal consultations on both energy and capacity streams dealing with issues such as evolving the demand response auction, creating a capacity auction, and investigating capacity trade opportunities. The scope of the LTEP should incorporate these efforts in order to ensure that these initiatives are aligned with new climate policies and ability for renewables to compete under any new market structures.

2.7 Increasing Data Accessibility for Customers and Industry

The scope of the LTEP should include how the Ministry of Energy can further support the efficient access and distribution of utility data for customers and industry. This should include completing the IESO's Foundation Project and ensuring the rapid implementation of the Green Button Initiative. Ensuring that third parties within the DER industry have efficient access to accurate and regularly updated data for utility customers will help them provide effective solutions for ratepayers.

2.8 Addressing Supply Adequacy Risks

The scope of the LTEP should include plans for how the province will effectively prepare for the different supply adequacy risks identified within the IESO's forthcoming Ontario Planning Outlook (OPO).

2.8.1 Nuclear Refurbishment and Extensions

The nuclear refurbishment schedule is set to begin in 2016 and continue through to 2033. Within this period different units from the Bruce and Darlington generating stations will be brought off-line,

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refurbished, and brought back on-line in a staggered fashion. The nuclear refurbishment schedule contains two primary risks. First, that units will not be returned to service on-time, and secondly, that costs of refurbishment will overrun. In both cases alternative resources could be required to meet the supply gap that would be created. Additionally, the risk of Pickering not operating to its new extended life of 2024 poses a similar risk.

The scope of the LTEP should directly address how the Ministry of Energy plans to meet those gaps, should they occur. As described above, that plan should incorporate the GHG emissions and associated cost of carbon implications of meeting those gaps with increased use of natural gas vs renewables. The scope of the LTEP should also address how alternative resources will be assessed in the event that they can present a more cost effective source of supply vs refurbishing all currently planned nuclear units.

2.8.2 Conservation Targets

The scope of the LTEP should include a plan for meeting supply adequacy targets given the risk of conservation targets not being met. While this is identified as a risk in the IESO's OPO, the extent and impact of that risk should be further detailed. For example, the LTEP should incorporate Ontario Energy Board verified results of existing conservation programs and a forward looking assessment of the ability of currently planned (and future undefined programs) to fulfill the forecasted energy savings.

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. If changes were made to better align CDM eligibility with behind the meter solar, behind-the-meter and virtual net metering DSG installations can be used to 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. DSG can also be an effective option for LDCs to meet their CDM targets (without relying on behind the meter natural gas) while at the same time aligning the interests of LDCs and customer-driven DSG.

3. Conclusion

Once again CanSIA appreciates the opportunity to provide preliminary scoping comments into the LTEP process. Our recommendations for issues/items to include in the scope of the LTEP are centered on ensuring that solar energy can continue to play an increasingly important role in Ontario's energy sector. In order to effectively transition solar from its current models of usage into an active, responsive, customer focused and inexpensive source of energy, CanSIA recommends that the scope of the LTEP include:

1. Transitioning distributed solar generation industry to a net metering based framework by utilizing existing commitment to FIT 5 and FIT 6, ensuring the net metering regulation permits

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TOU compensation, third party ownership and community solar, and establishing a declining capital cost incentive;

2. Focusing on regulatory and market evolution to modernize LDC compensation structures and the use of market mechanisms to encourage DER use;
3. Address connection barriers to achieving grid parity in Ontario;
4. Planning for the impacts of climate change policy including meeting electricity demands using emissions free supply sources;
5. Expanding the scope of regional planning to better utilize conservation and DERs;
6. Ensuring market renewal initiatives support renewables;
7. Increasing data accessibility for customers and industry; and
8. Addressing supply adequacy risks including nuclear refurbishment and conservation targets.

Sincerely,



Ben Weir

Director of Policy and Regulatory Affairs
Canadian Solar Industries Association

CC: John Gorman, President & CEO, Canadian Solar Industries Association
Wes Johnston, Vice President, Canadian Solar Industries Association