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April 12, 2019

COPY FILED VIA EMAIL AND COURIER

Board Secretary,
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, Suite 2700
Toronto, Ontario M4P 1E4
Dear Board Secretary

Attn: Board Secretary

Re: Rate Design for Commercial and Industrial Customers

(Board File No. EB-2015-0043)

Please find attached the Canadian Solar Industries Association's comments on the February 21, 2019 Staff Report to the Board: Rate Design for Commercial and Industrial Electricity Customers to Support an Evolving Sector.

Yours truly,

Wes Johnston

Vice President
Canadian Solar Industries Association

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

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Background

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 electricity 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 is pleased to respond to the Ontario Energy Board's (**OEB**) Staff Report to the Board, *Rate Design for Commercial and Industrial Electricity Customers to Support an Evolving Electricity Sector* (the **Report**).

Ontario's electricity sector is evolving in a way that will challenge the business model of traditional electricity stakeholders. Distributor revenue is decoupling from electricity sales and the OEB's Renewed Regulatory Framework (**RRF**) fundamentally changes the investment incentives and the risks facing Local Distribution Companies (**LDC**). These changes will also challenge all stakeholders, including the Ontario Energy Board, to develop new paths to maintain viability in accordance with the objectives set out in section 1(1) of the *Ontario Energy Board Act, 1998*, as amended.¹

The OEB's RRF encourages LDCs to seek value for customers when planning their distribution system investments. Focusing on delivering value for customers rather than recovering costs has shifted the focus of LDC distribution planning to facilitate customer choice. LDCs are expected to facilitate and enable Conservation and Demand Management (**CDM**) activities, distributed generation, smart grid initiatives and energy management services. This focus is intended to cut costs for ratepayers, reduce community friction, lower electricity demand and reduce the need for infrastructure investment throughout the power system. As independent parties and non-utility entities begin offering new technologies and services to consumers, LDCs are being required to approach distribution planning very differently than in the past. Facilitating customer choice in services such as distributed solar generation (**DSG**) and energy storage solutions creates the ability for customers to respond to market signals and support distribution system needs at lower cost.

CanSIA believes that the trend of increased connection of distributed energy resources (**DERs**) to distribution systems and associated two-way energy flow platforms will continue to grow in the future.² Consumers will have increasingly strong economic incentives to self-supply a portion or all of their energy needs from renewables and DERs. Underlying electricity rate structures must also evolve to facilitate this transition and the resultant customer benefits through appropriate price signals.

¹ Mark Muro and Devashree Saha, Rooftop Solar: Net Metering is a Net Benefit, Brookings Institution, <http://www.brookings.edu/research/papers/2016/05/23-rooftop-solar-net-metering-muro-saha>.

² Gavin Bade, The Future of Rate Design: Why the Utility Industry may Shift Away from Fixed Charges, Utility Dive, <http://www.utilitydive.com/news/the-future-of-rate-design-why-the-utility-industry-may-shift-away-from-fix/409504/>.

Executive Summary

The Report was promulgated by OEB Staff after consultation with utility stakeholders, and very minimal consultation with DER providers and the customers they have served. As a result, the Report does not reflect broad-based consensus of customers and DER providers, includes recommendations that are at odds with the Board stated and statutory objectives and does not provide sufficient policy rationale for the recommendations. Further, the Report does not provide rationale for the newly expedited timelines and the compromises that it proposes to impose in order to achieve same.

Similarly, there is no recognition of the interrelated policy implications of the related regulatory initiatives by the OEB that are currently underway. The lack of detail or rationale for implementing some of the proposed policies appear to be driven by the need to immediately take action and to address the unsupported position that uptake of distributed resources will have a material adverse impact on non-participating customers and distributors, with no evidence of materiality of actual market activity in support of that concern.

As a result, CanSIA strongly recommends that OEB Staff take the necessary time to consider and reflect on the following recommendations and defer the implementation of the Report until it can be integrated with the following recommendations to the Board, the upcoming consultations on Responding to Distributed Energy Resources (EB-2018-0288) and Utility Remuneration (EB-2018-0287). This approach will allow the Board to better understand current DER and customer realities, afford stakeholders the opportunity to evaluate a range of options in recognition of the evolving sector, and better support innovation and reducing overall costs for all electricity customers.

In November 2018, the OEB received the recommendations from the its Advisory Committee on Innovation and in 2019 the OEB initiated two further proceedings targeted at DERs. This commercial and industrial rate design consultation should be integrated with those ongoing consultations since all are related and will contribute to the significant changes occurring in Ontario's electricity sector (i.e., adoption of DERs, changing LDC business models, enhancement of customer choice) and require a co-ordinated response consistent with the enduring principles of customer choice and fostering of competition established by the Board.

Rate design influences customer and distributor investment decisions today and the OEB must develop a progressive and responsive rate design reflecting current DER realities, which will send the right signals to the market while achieving the stated objectives. Further OEB Staff consultation should proceed under fixed timelines that include time and resources for:

- i) a jurisdictional review of best practices in progressive rate design and DER integration,
- ii) adequate and meaningful stakeholder engagement to ensure all and diverse feedback and analysis is appropriately integrated, and
- iii) a formal process to present, review and finalize new rate design options with stakeholders before presentation to the Board, including a timeline for developing and implementing a DER cost/benefit estimation methodology.

Objectives and Principles

The cover letter to the Report identifies four objectives for new commercial and industrial distribution rate designs. CanSIA strongly endorses the stated objectives and recognizes that balancing objectives may, in certain instances, require trade-offs. However, the recommendations in the Report appear to disregard or be entirely at odds with most of the objectives.

Table 1. OEB Stated Objectives and Effectiveness

OEB Stated Objective	Recommendations Effectiveness
<i>Facilitate customer adoption of technology to manage energy use and costs, including the installation of distributed energy resources</i>	The recommendations do not facilitate customer adoption of technology and management of energy use. In fact, the Capacity Reserve Charge (CRC) can reasonably be expected to result in over-charging DER customers, and discouraging customer adoption of DERs.
<i>Increase efficiency of the system by encouraging cost effective investment in distributed energy resources</i>	The recommendations do not encourage investment in DERs. No price signals are offered, and the proposed demand charge design ignores distribution system cost drivers relevant to customers considering DERs.
<i>Maintain fairness in the recovery of costs of maintaining a reliable and flexible distribution system and ensure that customers who install distributed energy resources do not shift costs to other customers</i>	The recommendations artificially protect distributor revenues, through the new, standardized and excessive CRC applicable to DER customers. This is contrary to objectives 1, 2 and 4 and creates considerable inequities for DERs and DER customers and LDCs that facilitate DER uptake. Proactive regulators in other markets are looking at monetizing and valuing the benefits of DER services to the distribution system. In contrast, the Report recommends a new, significant cost to DERs, and avoids/allays consideration of DER benefits into the future.
<i>Facilitate investments to modernize the grid in a paced and prioritized manner that will support customer choice and efficiency</i>	The recommendations are contrary to this objective. They do not create price signals, negate certainty on even the form of future price signals, and provide no test to determine whether a given investment is properly paced (or not).

Each and every recommendation in the Report should be measured against the stated objectives to assess their effectiveness and viability. The implementation of distribution rates for commercial and industrial customers across Ontario is a complex process, however it is critically important to get it right. This process should clearly be coordinated with broader considerations of DERs costs and benefits to the distribution system and the transmission network in order to ensure their efficiency, effectiveness, and avoid stranded assets.

Substantive Concerns with the Staff Report

There are a number of reasons why the proposed rate design in the Report must be refined and subject to further consultation. The Report and consultation process do not appear to reflect stakeholder feedback and is notably absent of the views of DERs and DER customers. The 2016 staff discussion paper presented 6 rate design options for 4 different customer classes. The Report lacks compelling analysis and information as to how the OEB determined that the current proposal is preferred over the other, which were not compared in the Report.

The consultation process following the 2016 staff discussion paper has been ad-hoc, limited in scope, selective in the stakeholders who were asked to continue to participate, and spread over a long period of time (over 2 years since initial staff discussion paper was published and feedback submitted to the OEB). The process is not characterized by the procedural fairness that the stakeholders expect, and the Board is required to provide.

In the stakeholder session on March 7, 2019, staff reported that the main driver for the proposed rate design was customer simplicity, which is understandable if discussions were targeted only, and directly at, low volume customers. Meaningful stakeholder input will, however, assist Board staff in developing rate designs that meet all four of the stated objectives established for commercial and industrial distribution rate design and chart a path to a more interactive and transactional electricity market, to the goal of lowering costs to the benefit of all customers.

The analysis is insufficient as presented in the Report is insufficient to support any of the stated objectives and will prejudice a number of customers who have prudently adopted DERs and may now be facing extreme rate shock. The analysis is simplistic, unsupported, and based on scenarios of customer uptake and distribution cost avoidance/transfer assumed, but not tested, by Board Staff. No data has been presented that supports such scenarios or actual market uptake of distribution cost avoidance to date.

The Report analysis focuses on impact to customer bills and did not prudently or diligently consider broader benefits and costs that the new rate design could have on all customers. For example, the Report includes no analysis of the benefits and impacts on short, medium, and long-term distribution system expansion requirements that would potentially result from a shifting to a time of use peak demand charge or a coincident peak charge, which would incent distribution system peak reduction. This may defer or delay capital costs that customers would otherwise be required to pay for.

The Report also does not include any reference to distribution rate design in other jurisdictions. The consultation has been undertaken very sporadically over two and a half years. In that time many changes have occurred that merit consideration in the Ontario context (e.g., NY REV, CAISO market design and other regulatory proceedings). Selection of design components (i.e., Non-Coincident Peak (**NCP**) Demand Charges, CRC, Fixed Monthly Charges) have not been adequately compared to related DER rate design(s) in other jurisdictions, and early results of same.

The Report is, instead, focused on preserving the status quo and mitigating potentially foregone distributor revenue from DERs, and ensuring that there is no potential for cost shifting between customers:

*The current rate design of fixed and volumetric charges does not align well with the changing use, expectations and value to some customers. It can lead to uneconomic decisions by the customer and shifting of costs to more traditional customers who are either unable to, **or choose not to**, adopt new technologies.*

While there is a potential for cost shifting due to uneconomic decisions by some customers, the lack of an appropriate price signal for the cost of future system optimization eliminates the potential for distribution system cost savings.

Customers that are not informed of the higher cost of consumption during constrained hours will not adjust their consumption patterns or seek out potential net beneficial investments that could reduce costs to all customer by incenting efficiency across the distribution system. Instead, the distribution system will be expanded and burden all customers with higher costs. Effective price signals will dissuade inefficient behaviour, in this case leaning on the system or free riding, while other customers are not rewarded for economically efficient decisions that are individually beneficial and beneficial to all other customers.

The Report only considers costs and does not consider associated individual and system-wide benefits of DERs to the distribution system and all distribution customers. This also appears to be entirely at odds with the Board's recent March 7, 2019 Decision in EB-2017-0049, which encourages the use of DERs as a lower-cost reliability measure.

New services and technologies offered by unregulated entities are allowing customers to change their distribution consumption patterns and distribution system needs without changing their internal electricity needs. In many cases the services offered do not require customers to do anything and are therefore independent of their consumption decisions. The technological capability of mutually exclusive consumption decisions can offer significant benefits to the distribution system as a whole, but they require a price signal to inform consumption patterns and decisions. A rigorous, widely applicable methodology for estimating costs and benefits is a necessary pre-requisite and adjunct to any rate setting mechanism in this context.

CanSIA therefore strongly recommends that the development of a benefits methodology be developed and implemented at the same time that the OEB implements a new approach to commercial and industrial distribution rates. This should form part of the scope and terms of reference for the upcoming OEB consultation on Responding to DERs.

Value of Distributed Solar Generation (DSG)

CanSIA is submitting the following feedback in response to the Staff Report and many of these themes were contained in the CanSIA submission to the rate design options presented in 2016. The underlying principles and feedback inform progressive rate design that better satisfy the four objectives set out for commercial and industrial rate design proposal.

Ontario is undergoing significant economic changes due to internal and external trends that will reshape the province and its electricity market. DSG is a unique energy resource that can help Ontario move towards a prosperous low-carbon future through further electrification and support a robust domestic solar industry. These trends will require new technical capabilities, policy and regulatory changes for the electricity sector to ensure the continued delivery of safe, reliable, clean and cost-effective electricity to consumers in Ontario.

DSG provides the following system value and benefits to Ontario:

- Located behind the meter, it is an effective Conservation and Demand Management measure.
- Regional planning and distribution system planning benefit from having DSG as a grid-responsive and flexible resource option to meet power system needs.
- DSG provides consumers with choice over the type of power they utilize and control over how to utilize it while simultaneously allowing LDCs and other non-solar customers to receive benefits on the system.
- It provides consumers an investment option to hedge against the risk of rising electricity rates and increases resiliency.
- It reduces the need for centrally procured resources (through either long term PPAs or shorter-term incremental capacity auction commitments) and shifts the capital cost and performance risk to the market, to the benefit of all customers.
- It is a supply mix diversification option that reduces peaking natural gas combustion in support of Ontario's climate change objectives.
- It leverages strong public support for DSG to engage Ontarians in the electricity sector and its evolution.

Comments on Rate Design Options

Fully Fixed Charges for GS < 10 kW customers

In seeking alignment of rate designs with the OEB's stated objectives, it is noted that fully fixed charges:

- Do not incent/reward conservation at peak (or at anytime).
- Do not enable customers to leverage self-generation technologies using renewable resources or support innovation/enable access to energy options.
- Do not vary by time of day.
- Do not allow customers to take actions to respond to price signals that would benefit all distribution customers and as a result are unable to reduce their distribution costs
- Does not send strong economic signals to the distributor as to the required level of distribution investment

its customers will need in the future, or where investment should be made or could be avoided.

The Board has emphasized the importance of a distribution rate design that focuses on aligning customer and distributor interests. The Report seems to narrowly interpret this desire for alignment to mean that distributors revenues will not be reduced as a result of customer decisions. A fully fixed charge favours revenue certainty of the distributor over the customer's ability to reduce their costs and utilize technologies such as solar and or storage in a net metering configuration or energy management strategies that could shrink overall distribution costs in the future and share these benefits with the participating customer.

While a fully fixed charge may be the simplest to understand for consumers, simplicity should not be the most important factor for distribution rate design for commercial and industrial customers who have a greater willingness/ability to manage their energy consumption for the purposes of responding to price signals. In many US jurisdictions, fixed charges are being re-evaluated in favour of more thoughtful rate design processes that recognize the time-based value of electricity and seek to create price signals that recognize that value through some aspect of volumetric pricing.³

CanSIA does not support the creation of a new rate class for GS ≤ 10 kW customers that is based on a fully fixed cost in the absence of the introduction of a benefits methodology.

³ Gavin Bade, The Future of Rate Design: Why the Utility Industry may Shift Away from Fixed Charges, Utility Dive, <http://www.utilitydive.com/news/the-future-of-rate-design-why-the-utility-industry-may-shift-away-from-fix/409504/>.

Time of Use Demand Rate for GS < 50 kW and GS > 50kW

The Report dismissed the introduction of a time of use based demand rate for commercial and industrial customers. In seeking alignment of new rates with the OEB's stated objectives, it is noted that a time of use demand rate:

- Enables customers to leverage new technologies, including self-generation using renewable resources.
- Helps customers manage their bills through conservation.
- Helps customers understand the value of electricity service.
- Links rates to cost drivers more closely.
- Facilitates consumer choice by supporting innovation and enabling access to energy options.

Net metering solar or solar plus storage customers could reduce on-peak consumption resulting in cost savings for all customers and reduction of stress on the distribution system or the need for system expansion. A lower off-peak rate would reflect the relatively lower impact on the distribution system.

CanSIA generally supports the time of use demand rate and encourages further consideration of incorporating a coincident peak methodology to reward customers who respond and actively choose to reduce demand during coincident peak periods that offer the greatest benefit and cost savings on the distribution system.

Capacity Reserve Charge

Board staff introduced a new standby charge but have provided no credible rationale for the inclusion of the Capacity Reserve Charge (CRC). A CRC in the appropriate allocation of costs and benefits to DERs, but a CRC should only be considered and evaluated in the context of an assessment and introduction of a methodology quantifying the costs and benefits that DERs can offer to the distribution system.

The Report proposes that average annual technology specific capacity factors will be used to calculate the expected DER technology output as a function of installed nameplate capacity for different resource types. Capacity factors for many technologies will have little correlation with peak demand reduction in every hour of billing period. This is particularly true for variable output renewable resources such as solar energy. An average annual capacity factor is very different from a probability of monthly reductions in peak demand in every hour and demand charges that a customer can forecast. For example, solar generation output differs depending location (sites in the north have different production profiles than sites in the south), determining a province wide CRC will significantly disadvantage many customers. Further, for a number of customers, the CRC could result in extreme rate shock.

As designed, it appears that the Report significantly underestimates LDC over-collection of distribution charges from customers that install DER technologies, and customers installing variable output renewable technologies like solar energy are likely to be most negatively impacted and penalized under the proposed methodology. This is neither just, nor reasonable and is entirely inconsistent with good rate-making principles.

Conclusion

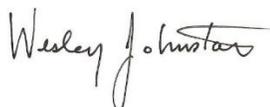
Rate design for all customers should focus on sending the right price signals so they can make investments in DERs and adjust their behaviour in ways that benefit the system as a whole. This should involve incorporating time-based distribution rates with sufficient difference between on-peak and off-peak, as well as maintaining certain volumetric aspects of rates in order to allow customers to conserve and use DERs efficiently and effectively. Fixing too large a portion of the bill undermines customer choices and their ability to respond to price signals in meaningful ways. CanSIA strongly opposes any rate design that: favours fixed rates that cause customers to be unmotivated or unable to modify behaviour and make changes that have an impact on their electricity bill; fundamentally undervalue the benefits of net metered solar and DERs to the distribution system; and dis-incent behaviours that create savings for all customers. This is also entirely inconsistent with the Board's stated and statutory objectives.

The regulatory environment in Ontario needs to evolve over time to incent LDCs to meet customer's growing needs and desires, including the ability to manage their electricity usage and make use of solar energy and other DERs. Regulatory restructuring processes, such as New York's REV, have important lessons for Ontario in this regard.

The interrelated nature of the upcoming OEB consultations on Utility Remuneration and Responding to DERs should encompass further meaningful stakeholder consultation on commercial and industrial rate design prior to presenting any such recommendations to the Board, and CanSIA looks forward to being actively engaged in those consultations.

All of which is respectfully submitted.

Sincerely,



Wes Johnston

Vice President
Canadian Solar Industries Association

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