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Ms. Kirsten Walli Board
Secretary Ontario Energy
Board 27th Floor
2300 Yonge St
Toronto, ON M4P
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Re: Rate Design for Electricity Commercial and Industrial Customers (Board File No. EB-2015-0043)

Dear Ms Walli,

Please find attached the Canadian Biogas 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. We look forward to ongoing engagement in these important policy matters that impact our members and the growth of the biogas industry in Ontario.

Sincerely,

Jennifer Green
Executive Director
Canadian Biogas Association

cc: Laurie Reid, OEB
Sarah Stadnyk, CBA
Jim MacDougall, Compass Energy Consulting

Rate Design for Electricity Commercial and Industrial Customers (EB-2015-0043)

Ontario Energy Board – April 12, 2019

Canadian Biogas Association

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Background

The Canadian Biogas Association (CBA) is a non-profit organization representing farmers, municipalities, technology developers, consultants, finance and insurance firms, and other affiliate representatives – all with a focus on building the biogas sector in Canada. CBA members produce renewable electricity and renewable natural gas in Ontario from many anaerobic digester types. CBA members are also customers of transmission and distribution utilities in Ontario, and many have current distribution connection applications in development or underway. CBA members often experience challenges associated with building and operating distribution connections, challenges which can in many cases be helped or hindered as a result of the business practices adopted by distributors in response to the prevailing regulatory approaches to distributed energy resources as well as the alignment or misalignment with distributors financial drivers.

Biogas technologies offer many benefits to host customers, communities and the local and global environment. The broad range of benefits stretch beyond their impacts on electricity distribution systems however they are important to understand. Ontario has over 30 operational biogas facilities that reduce GHG emissions by 216,000 T eCO_2, the equivalent of taking over 43,000 cars off the road. In addition to renewable energy, biogas facilities produce nutrient rich digestate which can replace artificial fertilizers and return valuable nutrients to the fields. Replacing one tonne of artificial fertilizer with digestate saves one tonne of oil, 108 tonnes of water, and 7 tonnes of CO_2 emissions. Biogas also supports rural economic development as the systems involve engineering design and technical components that address feedstock storage and pre-treatment; pumps, mixers, and piping; heating and gas collection; plus other equipment needs for the specific end use application. Most services and the majority of the components can be sourced locally.

Despite the positive attributes of biogas technology, the business case for customer-based investment in this innovative technology is not very strong. There has been modest uptake with approximately 45 anaerobic on-farm digesters and biogas generation projects installed in Ontario, out of a market potential of up to 3400 dairy operations alone. This type of innovative customer-based generation technology should be supported with proactive policies encouraging greater uptake.

Significant change is underway in Ontario and there is growing interest in commercially-available technologies for generating, distributing, storing and managing power at the distribution level. As the Ontario Energy Board (OEB) has noted, there will likely be new business opportunities for distributors and their competitive affiliates to provide value-added services to customers, as well as to achieve operational savings for themselves and other market participants. It would be premature to speculate on the specific technologies and business models that will become most attractive to customers, but they will likely combine innovations in distribution, efficiency, generation, storage and smart grid technology. In order to implement the full range

of innovative solutions with economic value, distributors and their affiliates will almost certainly choose to collaborate or partner with other kinds of market participants.

The CBA is strongly supportive of the initiative being taken by the OEB's regulatory policy evolution in matters such as commercial and industrial distribution rate design. Further and related to distribution cost recovery, the CBA recognizes that certain types of remuneration models and Distributed Energy Resource (DER) response plans will facilitate efficient investment and align the interests of customers, DERs service providers and regulated electricity distributors. There will likely be distribution cost recovery models that may inhibit customer investments, but that could otherwise benefit distributors and other non-participating customers. Developers of distributed generation using biogas as its renewable input fuel should not operate at cross-purposes with distributors' regulated wires companies and business drivers. For these reasons the approach taken to Utility Remuneration and DER response planning could have a significant impact on CBA members' generation businesses and generation facilities, both those in operation and those under development.

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Executive Summary

The OEB staff Report issued on February 21, 2019 (the "Report") appears to have been brought forward in a manner that is lacking in terms of the consultation process, little evidence supporting the recommended policy direction, and does not appear to align the interests of distributors and customers.

Policy Direction

The outcomes of the proposed policy direction appear to result in a protection of distributor revenue through the proposed changes including:

1. The move to fixed distribution rates to small commercial and industrial customers through the newly proposed GS < 10 kW rate class
2. The elimination of volumetric rates and implementation of demand-based rates for commercial and industrial customers 10 kW < GS < 50 kW
3. The introduction of a Capacity Reserve Charge for commercial and industrial customer GS > 50 kW, and

These policy directions will certainly protect distributors revenues, however they will not align the interests of distributors with customers that are looking at installing behind the meter energy solutions that could offer benefits to the distributor and save all customers costs.

CBA Recommendations

1. The CBA 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.

2. The CBA generally supports the time of use demand rate and encourages further consideration of incorporating a time based or coincident peak methodology to reward customers who respond and actively choose to reduce demand, perhaps through some form of incentive or benefit quantification methodology.

3. The CBA does not support the proposed CRC as it appears to represent an over collection of costs to active customers seeking to reduce electricity costs, and is not balanced with any consideration of compensating biogas generation or other behind the meter technologies for the benefits they can provide to the distribution system.

Consultation Process

Rate design influences customer and distributor investment decisions today and the OEB must develop a progressive rate design that will send the right signals to the market, while achieving a number of complimentary policy objectives. Further staff consultation should proceed under a fixed timeline that includes allocation of time and resources to ensure that any policy decisions are informed by:

i) a jurisdictional review of best practices in progressive rate design,

ii) adequate and meaningful stakeholder engagement to ensure feedback and analysis is appropriately integrated,

iii) a formal process to present, review and finalize new rate design options before presentation to the Board, including a timeline for developing and implementing appropriate price signals to DERs including a cost and benefit estimation methodology, and

iv) alignment of distributor interests with customer interests through further consideration of commercial and industrial rate design and its relationship with utility remuneration models.

CBA Recommendation

The CBA recommends that the OEB defer the implementation of the recommendations in the staff Report and integrate those policy considerations, and recommendations to the OEB, into the upcoming consultations on Responding to Distributed Energy Resources (EB-2018-0288) and Utility Remuneration (EB-2018-0287). This approach would afford stakeholders the opportunity to evaluate a range of commercial and industrial distribution rate options in recognition of the evolving sector and better support innovation and reducing overall costs for all electricity customers.

Objectives

The February 21, 2019 cover letter accompanying the OEB staff Report identifies four objectives for new commercial and industrial distribution rate designs. The CBA supports the stated objectives however is unclear that the proposed policy direction accomplishes or moves toward accomplishing these objectives.

Table 1. OEB Stated Objectives and Effectiveness

	Objective	Comments
1.	*Facilitate customer adoption of technology to manage energy use and costs, including the installation of distributed energy resources*	The recommendations do not facilitate customer adoption of technology. Dispatchable behind the meter generation from biogas could respond to system need and support the grid by offering ancillary services to the distribution system but this opportunity is missed in the proposed approach.
2.	*Increase efficiency of the system by encouraging cost effective investment in distributed energy resources*	The recommendations do not encourage investment in DERs as no price signals are offered and the proposed demand charge design does not incent reducing distribution system cost drivers.
3.	*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*	The recommendations ensure that distributed generation pays costs, without any consideration of benefits to the grid or price signals to optimize output to save distribution costs for all customers. A benefits methodology is needed to ensure fairness.
4.	*Facilitate investments to modernize the grid in a paced and prioritized manner that will support customer choice and efficiency*	The recommendations do speak to modernization at any pace, which would be well informed through the upcoming utility remuneration consultation.

The recommendations in the Report do not appear to support these stated objectives so it is difficult to assess their effectiveness. The implementation of newly designed distribution rates for commercial and industrial customers across Ontario is critically important and the OEB must get it right and should be coordinated with broader considerations of DERs costs and benefits to the distribution system.

Comments on Rate Design Proposals

Fully Fixed Charges for GS < 10 kW customers

The Report recommends the creation of a new rate class for very small general service customers GS < 10 kW and OEB staff suggest that these customers demonstrate characteristics similar to residential customers. This leads to the conclusion that such GS < 10 kW customers should pay distribution rates in a manner that has been set in place for residential customers, fully fixed monthly charges.

The CBA notes that fully fixed charges:

- Do not encourage conservation, during peak hours or at any time.
- Do not facilitate dispatchable self-generation technologies using renewable resources or support innovation to encourage customer-based energy solutions.
- Do not vary by time of day to relieve distribution system constraints.
- Do not allow customers to take actions to respond to price signals that would reduce system peaks to the benefit of all distribution customers and as a result are unable to reduce their distribution costs.

The Board has emphasized the importance of a distribution rate design that focuses on aligning customer and distributor interests. The Board staff paper 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 biogas with its biogas storage capabilities in a net metering configuration that could reduce overall demands and thus distribution costs in the future and share these benefits with the participating customer.

There is a 10 kW micro-generation biogas facility operating in Ontario that could likely fall into this rate category. Biogas proponents are looking to this small-scale facility to assess the experience and economics of the operation of this facility to see if it can be replicated. The economics are not compelling, and the move to a fully fixed distribution charge would render the business case worse. At present there is no methodology or ability for a distributor to easily offer such a micro-generation facility compensation for reducing demand on the grid, which would help both the participating customer as well as the distribution system operator, and surrounding community.

For these reasons, the CBA 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.

Demand Rates for GS < 50 kW and GS > 50kW

The Staff Report proposes the introduction of peak demand rates for commercial and industrial customers regardless of the time of day that the customer realizes that peak demand. There does not appear to be any consideration to time of use-based demand rates or even demand rates that are set based on peak demand between 7 am and 7 pm.

The CBA notes that a time of use demand rate:

- Enables customers to leverage new technologies, including self-generation using renewable resources such as biogas to reduce demand and strain on the distribution system and realize cost savings.
- Helps customers manage their bills through efficient operation and conservation.
- Helps customers understand the value of electricity service.
- Links rates to cost drivers more closely.
- Facilitates consumer choice by supporting innovation and encouraging efficient energy solutions.

Using behind the meter biogas with 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. Biogas synchronous generators are able to offer services to the distribution grid particularly important for certain long rural feeders where voltage fluctuations or power quality impacts end use customers. These ancillary services could improve distribution system reliability and benefit nearby customers however there are no mechanisms yet in place to encourage generator support to the distribution system.

The CBA generally supports the time of use demand rate and encourages further consideration of incorporating a time based or coincident peak methodology to reward customers who respond and actively choose to reduce demand, perhaps through some form of incentive or benefit quantification methodology.

The elimination of volumetric charges for GS < 50 kW customers will have a similar impact to such customers as was described in the previous section in relation to fully fixed charges.

Capacity Reserve Charge

Board staff propose a new standardized standby charge but have not supported the rationale for the inclusion of the Capacity Reserve Charge (CRC). A CRC may make sense in the appropriate allocation of costs and benefits to DERs, but should be considered and justified 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 staff 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 renewable resources such as biogas facilities which can have capacity factors that depend on input feedstock quantity and quality, seasonal impacts and operational needs of the host customer.

Average annual capacity factor will likely not correlate to monthly reductions in peak demand in every hour and demand charges that a customer can forecast.

The staff report notes that the proposed methodology will likely result in LDC over-collection of distribution charges from customers that install DER technologies, and customers installing renewable technologies like biogas could offer a wide range of actual capacity factors thus could be significantly penalized under the proposed methodology.

The CBA does not support the proposed CRC as it appears to represent an over collection of costs to active customers seeking to reduce electricity usage, and is not balanced with any consideration of compensating biogas generation or other behind the meter technologies for the benefits they can provide to the distribution system.

Other Concerns with the Staff Report

The proposed rate design in the Report requires further refinement and consultation. The Report lacks compelling analysis as to how the OEB determined that the current proposal is preferred over the other options as they were not compared.

The Report analysis focuses on impact to customer bills and did not consider broader benefits or costs that the new rate design could have on customers as a whole. For example, no analysis was presented in the report of the benefits and impacts on 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.

No reference to distribution rate design in other jurisdictions seems to have been considered. The consultation has spread 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 other jurisdictions rate designs.

The Report only considers costs and does not consider associated benefits of DERs such as biogas technology to the distribution system and all distribution customers.

New services and technologies offered by third parties are allowing customers to change their consumption patterns from the distribution system 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. These technological capabilities can offer significant benefits to the distribution system, but require a price signal to inform consumption patterns and decisions. A rigorous widely applicable methodology for estimating costs and benefits is a necessary adjunct to any rate setting mechanism facing challenges like these to encourage such innovation.

Thus, the CBA strongly recommends that the development of a benefits methodology 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 consultation on Responding to DERs.

Conclusion

Rate design for all customers should focus on sending the right price signals so customers can make investment decisions in DERs and adjust their behaviour in ways that benefit their electricity consumption preferences and the system as a whole. This should involve incorporating time-based distribution rates, as well as maintaining volumetric aspects in order to allow customers to utilize conservation and DERs such as biogas technologies to greater affect.

Fixing too large a portion of the bill undermines customer choice and their ability to respond to price signals in meaningful ways. The CBA opposes any rate design that favours fixed rates to the extent that customers are unmotivated or unable to modify behaviour and have an impact on their electricity bill, and, that fundamentally undervalue the benefits of behind the meter biogas generation and DERs to the distribution system, losing an opportunity to create savings for all customers.

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 biogas and other types of 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 CBA looks forward to being actively engaged in those consultations.

Thank you for the opportunity to participate in this important consultation.

Sincerely,

Jennifer Green

Executive Director
Canadian Biogas Association

CC: Sarah Stadnyk, CBA