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APPRO

ASSOCIATION OF
POWER PRODUCERS
OF ONTARIO

May 27, 2016

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
27th Floor, 2300 Yonge St
Toronto, ON M4P 1E4

**Re: Rate Design for Commercial and Industrial Customers
(Board File No. EB-2015-0043)**

Dear Ms. Walli,

Attached please find the comments of APPRO regarding the Staff Discussion Paper entitled "Rate Design for Commercial and Industrial Customers: Aligning the Interests of Customers and Distributors," released on March 31 2016.

Both I and other members of the APPRO Working Group engaged on this project would be happy to discuss this submission in greater detail with Board Staff should you have any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Jake Brooks", is written over a white background.

Jake Brooks
Executive Director

cc: Laurie Reid
Dave Butters

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Ontario Energy Board Staff Discussion Paper
Rate Design for Commercial and Industrial Electricity Customers: Aligning
the Interests of Customers and Distributors EB-2015-0043

APPrO Submission on Rate Design for Commercial and
Industrial Electricity Customers

May 27, 2016

Introduction

The Association of Power Producers of Ontario (APPrO) appreciates the opportunity to offer comments on the Ontario Energy Board (OEB) Staff's Discussion Paper in EB-2015-0043, Rate Design for Commercial and Industrial Electricity Customers: Aligning the Interests of Customers and Distributors (Discussion Paper).

APPrO is a non-profit organization representing independent electricity generators in Ontario. APPrO members produce nearly all the independent power generated in Ontario from facilities of many types, including gas-fired, hydroelectric, nuclear, solar and wind energy. APPrO members are customers of transmission and distribution utilities in Ontario, and many have current distribution connection applications in development or underway. APPrO 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 models and practices adopted by local distribution companies (LDCs or "distributors") in response to the prevailing rate design solutions. APPrO offers the following comments regarding the Discussion Paper and looks forward to a fruitful participation in this OEB proceeding. APPrO agrees with Staff that "the pace of change enabled by significant technological advancements is affecting how energy is produced, transported and consumed... [and that] "the way customers are charged for their use of the grid should reflect and encourage sound economic choices." (Discussion Paper, p. 1).

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APPrO believes when designing distribution rates for commercial and industrial customers that the following key issues need to be considered:

- Grid disconnection is an increasing risk for Ontario LDCs. The proliferation of new technologies and significant enhancements to existing technologies including Load Displacement Generation (LDG) and energy storage technologies are providing customers with alternatives to electricity services from their local distribution company. This represents a risk to all LDC customers. For example, an LDC may invest new capital to serve a customer's demand, and seek to bill that customer, only to find that the customer chooses to move production elsewhere, goes bankrupt, or disconnects. In these cases the LDC will have no recourse to that customer to collect this new investment, and difficulty collecting these costs from other customers given increasing competitive pressures.
- As regulated entities, LDCs are a low risk business with prescribed rates of return. Since LDCs are still exposed to some risks through their operation and investment decisions, distribution rate design should adequately incentivize LDCs to pursue low-risk investments that align with key drivers to their business, such as customer choice, regulation obligations, government energy policy and external financial pressures (i.e. interest rate fluctuations). APPrO supports distribution rate design changes that attempt to increase the rate recovery certainty for LDCs through prudent planning, transparent oversight and stakeholder engagement.
- To ensure the integrity of the grid as a whole, distribution rate design must recognize that customers have practical alternatives, and give them reasons to choose voluntarily to stay connected. The value of maintaining a connection to the electricity distribution system, whether as a primary delivery mechanism or as a reliable back-up, should be clearly understood by customers, and the primary motivation for remaining connected.

- Distribution connected generation, including LDG, provides real benefits that need to be recognized in electricity distribution rate design. These benefits can include GHG reductions, reduced system losses, power factor correction, reduction/elimination/deferral of LDC capital expenditures, emergency preparedness, grid diversity, operating reserve and demand response.

APPrO recognizes that Billing for Customers with LDG is being more specifically addressed by the OEB in a separate, but parallel policy review. Nonetheless, given the importance of this issue to distribution rate design for commercial and industrial customers and for ensuring efficient investment decisions with respect to LDG and distribution infrastructure we are raising this issue here and urge Staff to ensure that this commercial and industrial electricity customer rate design proceeding devote sufficient attention to the effect of such rates on LDG. In the simplest terms, this rate design must be sensitive to the impacts on LDGs to protect customer choice. This point was clearly recognized by Staff in the letter initiating this proceeding in which the changing role of LDCs was acknowledged: “In the future they will act more as a service platform offering services such as balancing, power quality, storage, and redistributing power from users connected to their systems. The rate design adopted by the OEB for distributors should position the companies for this future by linking the rate design to the cost drivers and making sure that customers value and pay their fair share for service.” (EB-2015-0043, May 28, 2015 Letter, p. 1)

Objectives

In its Discussion Paper, Staff framed objectives in terms of:

- A simple, understandable base rate for traditional customers
- Value peak capacity to align customer and distributor interests
- Recognize a customer’s costs and benefits to the system
- Encourage conservation

Further colour on these objectives was provided in the Discussion Paper and framed in terms of the rate design objectives outlined in the *Board Policy: A New Distribution Rate for Residential Customers*. In particular, the OEB stated that its goal is “to equip customers with the information and the tools they need to make informed choices about how they use energy and enable customers to leverage new technologies, including self-generation using renewable resources... [and its] objective is to facilitate customer choice by ensuring that the new rate designs support innovation and enable access to energy options...Customers should pay their fair share for the assets and services that they use and receive fair value for the services that they provide.” (Discussion Paper, p. 2) APPrO strongly supports these broader objectives and notes that they acknowledge the important role that Distributed Energy Resources (DER) can play within distribution systems.

As acknowledged by the OEB, customer choice is a critical tool in enabling customers to manage their electricity bills and APPrO notes that LDG and other technologies are an increasingly important element of such customer choices. Furthermore, APPrO agrees that distributor and generation owner objectives can be aligned by recognizing in rate design that a considerable portion of distribution investment is driven by customer and distribution peak loads. In other words, the distribution system is primarily expanded to meet both individual customer capacity needs and coincidental distribution system peak. Therefore energy production of LDG and DER should be focussed on these peak periods with respect to providing value to distributors and distribution systems. Energy production outside of the distribution system peak periods is primarily valuable to wholesale energy markets (i.e., HOEP and GA). Finally, APPrO notes that it is critical that the value offered by the services provided by DER be acknowledged in this rate design. The OEB accurately notes “the benefits to the system from distributed energy resources are highly dependent on the source, the location, the availability and the controllability. Those benefits include voltage regulation, frequency response, and load control. The value of these benefits to distribution systems is entirely dependent on location and the distributor’s ability to control them.” (Discussion Paper, p. 34). Rate design that provides clear guidance of how DER can provide value and where to

optimally site DER for different distribution system is an important component in meeting the OEB's objectives.

Comments on Six Basic Options Identified

Presented below are APPrO's high level comments on the six basic rate design options identified in the Discussion Paper. APPrO has based these comments on the assumption that Net Load Billing is being used as the bill determinant. In other words, a commercial or industrial customer's distribution bill would be based on the consumption after the impact of behind the meter generation.¹

Fully Fixed Monthly Charge

APPrO believes that the fully fixed monthly charge similar to what has been adopted for residential customers is not appropriate for commercial and industrial customers. The demand of commercial and industrial customers is expected to have a larger impact on distribution system needs compared to residential customers. Further, commercial and industrial customers are likely more involved and aware of their electricity cost and demand profiles and should therefore have clarity on their distribution system impacts and offered options to mitigate possible increased distribution system costs. This option conflicts with the objectives outlined in the Discussion Paper and does not support the broad array of DER options available to these customers. Furthermore, this option fails to acknowledge that an important driver of distribution system investment is peak loads, both the individual customer's for connection assets and aggregate distribution system peak for common facilities. Under such an approach customers would face no incremental cost responsibility for increases in peak loads that contributed to additional distribution system investment. APPrO believes that fully fixed monthly charges could be enhanced if LDCs had the freedom to engage in "customer specific negotiation" so as to provide a credit where the standard rate does not suit the circumstances. However, the rules should not allow so much freedom that rates could become punitive (i.e. some prudence tests will likely be required). Finally, this approach conflicts with numerous

¹ APPrO assumes Net Load Billing because the distribution system capacity needs is based on the customer demand at the distribution metering point and not based on the gross load of the customer behind the meter.

Ontario policies that are focussed on promoting distributed generation (e.g. Industrial Accelerator Program offered by the IESO) and securing the benefits that these resources offer.

In short, APPrO does not support the fully fixed monthly charge, absent customer specific negotiations since this rate design does not offer fair value for DER adopted by customers and provides no incentive to reduce a customer's impact on the distribution system.

Time-of-use kWh

Appropriately, OEB staff has proposed simpler rate designs for the GS < 50 class and avoided reliance on demand charges. Time-of-use periods are used to reflect the higher (lower) costs of peak (off-peak) period usage. Given the size and sophistication of these customers such a rate design is appropriate and reasonable for them and can provide appropriate price signals to DER and incent them to focus their output on the designated on-peak period. APPrO generally believes that alternative rate design options that employ demand charges are more appropriate for larger customers. For the relatively small GS < 50 class customers, energy charges may still be appropriate assuming that strong uptake of distribution rate mitigation by this customer class does not have a significant impact on distribution system plans or rate recovery by the distributors.

APPrO generally supports the time of use energy rate assuming the customer class this approach is applied to does not increase the risk of grid disconnection for the distributor.

Energy Usage Block

Under this approach customers choose a level of fixed charge for blocks of on-peak use and are subject to overage charges when they exceed the thresholds for specific blocks. This approach is predicated on customer choice and allows customers to designate the anticipated amount of on-peak use. Customers with DER would be able to select lower block amounts for on-peak use, but be subjected to overage charges to the degree that

their DER output was less than anticipated. This option would allow DER to clearly identify cost savings to customers by identifying the avoided amount of energy usage blocks a customer would need to purchase instead of the DER output. Depending on the actual rate design, this approach can provide a reasonable balance of risk and reward and therefore promote efficient production schedules by DERs.

APPrO supports the energy usage block rate design since it provides a clear and reasonably fair value of DER services to a customer as it relates to the distribution system impacts.

Minimum Bill

The Minimum Bill approach is essentially a hybrid that ensures some fixed cost contribution, but provides incentives for conservation and DER. This option can be well suited to smaller less sophisticated customers. It avoids fixed charges which can discourage conservation and DER and provides a variable rate which incents customers to employ these resources. Conversely, the Minimum Bill can provide a reasonable measure of fixed cost recovery for distributors. Clearly, the reasonableness of this rate design depends on the level of the minimum bill. This and the energy charge will determine the incentives for conservation and DER.

Depending on the rate design components, this rate design option could decrease the incentive for DER and conservation if distributors are too liberal with the inclusion of costs in the minimum bill calculation. Likely, distributors will be incentivized to include as many costs as possible in the minimum bill calculation since it provides greater certainty of rate recovery compared to the variable energy charge. If there is not enough separation between the minimum bill and energy charge there will be limited incentive for customers to consider alternative options for their electricity demand needs. In other words, the minimum bill rate design could become a mostly fixed monthly charge with a small, and unattractive to avoid, energy rate. Similar to the fully fixed monthly charges, APPrO believes customer specific negotiations would enhance this option.

APPrO does not support the minimum bill rate design, absent customer specific negotiations, and remains concerned about the risk of some costs being applied to minimum bill that could be mitigated by customer-specific actions.

Three part demand rates

This is a relatively sophisticated option that can more directly capture the cost causality of distribution system investment by establishing: (1) connection demand on the basis of maximum demand at any time; and (2) aggregate demand on the basis of maximum demand at distribution system peak. As such this option appears to closely follow cost causality. Customers are provided clear indication of cost associated with their individual demand on the distribution system along with a clear indication of the cost associating with their contribution to the total distribution system demand. This rate design would provide customers with options to reduce either, or both, their total monthly demand and their coincidental peak demand on the distribution system. The narrow on-peak period discussed in option 5 b) is intriguing since the time period would clearly indicate to customers when the distribution system is under the most stress. Further, the narrow peak period could be adjusted on an annual or per rate-filing basis to reflect changes in coincidental distribution system demand patterns. APPrO believes that the three part demand rate is a reasonably accurate reflection of the cost of having a customer be supplied by the distribution system and provides fair value to different options to reduce distribution rate impacts, whether it be customer connection costs or coincidental peak demand costs.

APPrO supports the three part demand rate design options and sees added value for DER and LDG in the narrow peak period approach suggested in option 5 b).

Time of use demand rates

This option values peak capacity, but doesn't necessarily reflect cost causation if the defined peak period doesn't fully reflect cost causation for the distribution system (i.e., customer-specific demand which is used to size connection equipment and aggregate demand, which is used to size the facilities that serve multiple customers). The critical

issue is definition of these peak periods, similar to the issue facing the three part demand rate. If the peak period is too broad and does not provide a clear indication when the distribution system is being stressed, it will be unclear to customers when distribution cost mitigation options should be considered.

The time of use demand rate is similar to the Network Billing Demand used to calculate the Network Service charge for wholesale provincial transmission service. APPrO believes there is benefit to consistency of rate design for distribution and transmission services from the customer's viewpoint. Further, consistent rate designs simplifies the assessment of benefits of DER and LDG options for customers. Overall, APPrO supports the time of use demand rates.

DER Credits

The establishment of credits for DER benefits to the distribution system would be a strong step forward in releasing the value of DER for meeting power system needs. As customers become more active in managing their electricity needs, DER can provide dual support options. DER could offset wholesale electricity costs by reducing the consumption of customers during high price periods. Further, DER could provide a variety of services to distributors to meet certain planning or operational needs. Providing credits for DER benefits would allow distributors to invest in a portion of the total DER cost that represents the direct value to the distribution system, leaving the remaining portion to customers who would utilize different benefits for electricity cost reduction (e.g., reduce consumption) or increased service quality. Clarity of how and when credits would be allocated is important and would need to be developed further.

Summary

Design Option	APPrO Position
Fully Fixed Charge (absent customer negotiations)	Not Supportive
Time of Use Energy	Supportive
Energy Usage Blockage	Supportive
Minimum Bill (absent customer negotiations)	Not Supportive
Three Part Demand: Broad Peak	Supportive
Three Part Demand: Narrow Peak	Strongly Supportive
Time of Use Demand: Off-Peak Charge	Supportive
Time of Use Demand: Off-Peak Free	Supportive
Distributed Energy Resources Credits	Strongly Supportive

APPrO thanks the OEB for the opportunity to provide comments as part of this proceeding and looks forward to continued discussion on commercial and industrial distribution rate design.