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November 22, 2020

Cassandra Rosen
Ministry of Energy, Northern Development and Mines
Conservation and Renewable Energy Division
77 Grenville Street
Toronto, Ontario M7A 2C1

Re: ERO Posting 019-2531

Dear Ms. Rosen:

Thank you for the opportunity to provide comments on ERO Posting 019-2531, Changes to Ontario's Net Metering Regulation to Support Community-Based Energy Systems.

Hydro One Networks Inc. ("Hydro One") is Canada's largest electricity transmission and distribution service provider. Our values guide us to work relentlessly to serve homes, businesses and communities across Ontario. In 2019, Hydro One invested approximately \$1.7 billion in its transmission and distribution networks to build and maintain a safe and reliable electricity system, which is essential to supporting strong and successful communities.

Hydro One has reviewed the proposal and offers the following recommendations to the Ministry of Energy, Northern Development and Mines (the Ministry) for consideration.

Customer and System Benefits

Broadening the scope of Ontario's Community Net Metering (CNM) program to permit virtual net metering at a community level has the potential to provide benefits for customers. Through economies of scale, a CNM project would provide the access point for a greater number of customers spread across different rate classes to take advantage of net metering opportunities. A CNM arrangement would allow the ability to optimally size and locate a generation and/or storage facility ("Net Metering Facility") behind the metered service of a participating customer to maximize the energy savings of all participating customers. Customers, who otherwise would not be able to afford the costs associated with installing a Net Metering Facility on their own, may be able to take advantage of the program. Hydro One believes that communities in its service territory would have an interest in participating in a CNM demonstration project and some community representatives have already expressed their interest in such an opportunity.

System benefits realized from a CNM project would depend on where the project is sited and whether the project is designed to relieve capacity constraints on the system or defer a planned system expansion. This would require projects to be coordinated with the distributor to determine whether a CNM arrangement could be designed to provide system benefits. If the grid is still relied upon to serve the community under various scenarios from a capacity perspective, the CNM project will not provide any benefits to the system because the infrastructure must still be built and maintained to be supply the

community in these scenarios. For a CNM project to provide system benefits, the project has to be designed such that the grid is not relied upon, in whole or in part, for providing capacity to meet the supply needs of the community under normal operating conditions. If the project can be designed to be fully or partly self-sustainable and would alleviate a constraint on the system from a load-serving perspective, this could potentially free up capacity on the system to serve other loads or defer the need to make system investments to meet future load growth.

Since the location and design of the Net Metering Facilities are therefore critical to whether a CNM arrangement could provide benefits to the system and ratepayers, distributors would need to coordinate with the lead CNM customer(s) in the planning of a project to ensure that it can deliver benefits to the system and ratepayers. Depending on the situation and the type of investments that could be required to unlock benefits for ratepayers and the system, the distributor may determine that some CNM demonstration project costs be shared with utilities and their customers. For instance, if integrated in the proper manner as part of the CNM project, energy storage could provide a means for minimizing the project's reliance on the grid for support. Therefore, Hydro One recommends that the rules and requirements for CNM demonstration projects provide some flexibility to allow for testing of innovative solutions and business models, where there is the opportunity to deliver potential benefits to all ratepayers.

The Role of Energy Storage

The proposal mentions the ability to integrate energy storage as part of a CNM demonstration project. Under the current Net Metering regulation, electricity produced from a customer's generation facility for its own consumption under a net metering agreement can also include electricity produced from the generation facility that is stored. Does the proposal intend to allow for storage to be used in the same manner for CNM demonstration projects or would the Ministry consider exploring different ways that storage could be deployed as part of a project to deliver value and benefits to both CNM participating customers and the system?

Opportunities for Indigenous Communities

The Ministry has stated that one of the key objectives of the proposal is to provide meaningful opportunities for Indigenous communities to participate in CNM. Hydro One can confirm that several First Nations communities have expressed an interest in developing a net metering project within their communities. Hydro One believes that exploring CNM demonstration projects within these communities would provide a means for evaluating different potential renewable supply options to improve reliability. For these projects, Hydro One also believes that the Ministry should allow some flexibility with respect to certain elements of a potential CNM arrangement, such as permitting flexible siting options for the Net Metering Facilities if this provides a more optimal means for improving services to First Nations communities.

The Role of Utilities

Based on the Ministry's proposed CNM model, it is clear that distributors will be expected to provide functions that support the enablement of a CNM demonstration project, similar to what they do currently to connect projects under the Net Metering program. The lead CNM customer(s) of the CNM demonstration project will ultimately be responsible for all aspects related to the development of the project, including the specifics of the CNM arrangement details, the siting of Net Metering Facilities and entering into a CNM agreement with the participating CNM customer accounts.

Each proposed CNM demonstration project has to be studied and assessed by the distributor to determine if there is available system capacity to connect the project. The lead CNM customer(s) will need to follow the distributor's Distributed Energy Resources (DER) connection application process to obtain capacity allocation for their CNM project. Due to the manner in which the Net Metering Facilities could be distributed within a CNM arrangement, a distributor may need to assess each individual facility connection to determine whether the existing connection facilities would be able to support the proposed size of the Net Metering Facility. Given the number of DER facilities already connected to the system, there is limited capacity available and technical (both transmission and/or distribution) constraints could prevent some viable project proposals from being able to proceed. To avoid wasting effort and time, it is recommended that the distributor should be consulted in advance to confirm or identify potential locations that would be suitable for connecting a CNM demonstration project.

In addition to studying the project's connection to the grid, the distributor hosting a CNM demonstration project will need to enter into a Net Metering agreement with the participating CNM customer that has a metered account with the distributor. While the distributor will continue to meter and bill these accounts, the distributor will need to create new settlement and billing processes based on the CNM arrangement. In those instances where the participating CNM customer accounts are sub-metered, Hydro One understands that the participating CNM customer who owns the bulk meter will be responsible for providing metering, settlement and billing services to the sub-metered customers in accordance with the terms of the CNM agreement.

While the proposal does not require a distributor to support the development of a CNM demonstration project beyond providing the distribution services mentioned above, Hydro One understands that a distributor would not be prevented from partnering in the development of a CNM demonstration project. The main advantage gained from involving a distributor in the project planning is that it could allow for the project to be designed in a way that would deliver grid benefits to ratepayers. The Ministry should give consideration to exploring a potential CNM demonstration project that would include grid side facilities as well as Net Metering Facilities.

Hydro One would also like to note that if the intent of a CNM demonstration project is to enable the participation of multiple load facilities or metered services within a localized area, it may be impractical for the participating customers to effectively coordinate such a CNM arrangement. To facilitate and enable the setup of a CNM demonstration project, a distributor may be able to identify and engage potential end use customers that could optimize the CNM arrangement for all participating customers. The Ministry is asked to provide further clarity on whether a distributor could provide additional services to support the project, beyond those already mentioned, in order to achieve additional benefits from the project for customers.

Proposed Regulatory Amendments

The following recommendations are specific regulatory amendments proposed for the Ministry's consideration.

CNM Arrangement Details

In the Ministry's proposed CNM model, the connected Net Metering Facilities are permitted to utilize the distributor's distribution system to supply power from one point (the facility hosting the Net Metering Facility) to another point (a metered service point) within the virtual CNM arrangement. The current Net Metering regulation, which prevents a Net Metering Facility from utilizing the distribution system to supply an end use load facility, will need to be amended to facilitate this arrangement.

By allowing a CNM demonstration project to utilize the distribution system in this manner, the distributor will need to assess the power flows in to and out of the distribution system within the virtual CNM arrangement under different conditions. Initially, Hydro One recommends that rules be established to limit both participation eligibility and to define the boundaries of the virtual net metering arrangement. This will reduce the complexity of the assessment and enable a distributor to effectively manage the operation of its system in supporting the CNM demonstration project.

Therefore, it is recommended that the proposal require that the participating CNM customers:

- Be located in the same service territory;
- Be located on properties that are contiguous (unless separated by a road crossing);
- Be restricted to the same feeder and voltage level; and
- Adhere to any limits on the size of their Net Metering Facility, which may be imposed by the distributor.

It should be noted that in many of the CNM model examples presented by the Ministry, a participating CNM customer is distributing electricity behind its meter to other sub-metered accounts. O. Reg. 161/99 permits a participating CNM customer to own and operate a distribution system provided that the system is entirely located on land owned or leased by that customer or the system supplies specific types of buildings or facilities allowed under the regulation. Unless they are a licensed distributor, the regulation will not permit a participating CNM customer to own a distribution system that supplies other customer-owned buildings or facilities located on other properties.

Hydro One understands that the Ministry does not intend to amend O. Reg. 161/99 or the Net Metering regulation to allow a participating CNM customer to distribute electricity behind its meter to other customer-owned buildings or facilities of the CNM demonstration project. Not only would this infringe on a distributor's service territory, but it would also represent an inefficient use of existing distribution assets and a potential safety concern to customers being supplied in this type of arrangement. Since the participating customer accounts in a CNM arrangement would be responsible for paying the costs related to the distribution of electricity just like any other customer supplied from the distribution system, it would also make sense to leverage the use of existing distribution assets to distribute electricity within the CNM arrangement. This would also ensure that the participating customer accounts in a CNM arrangement pay reasonable costs for the distribution of electricity.

CNM Demonstration Project Agreements

The proposal did not provide details regarding the general framework of a CNM demonstration project agreement. Since the distributor hosting a CNM demonstration project has to enter into a Net Metering agreement with each of the participating customer metered accounts, Hydro One believes that CNM project agreements should contain standard terms and provisions, to the greatest extent possible. This will provide much needed clarity for the participating customers of a CNM demonstration project as well as for the distributor that is responsible for billing the metered accounts of the participating customers. For instance, the Ministry should provide further clarity in regards to the following:

- *Account Eligibility:* Are there any types of metered accounts that would be ineligible to participate? What type of metered accounts (i.e. residential) would need to exist in order to be eligible as a CNM demonstration project?
- *Participation Rules:* Restrictions on customer account participation need to be defined based on connectivity and geographical location of facilities. Rules should also be designed to limit any changes in customer participation during the demonstration period. The terms of the

agreement should identify whether a participating CNM customer can leave the CNM arrangement, how a change in participation is reconciled and whether a sub-metered customer can decline to participate in a CNM arrangement.

- *Settlement and Billing:* Requirements must be established to specify how generation credits should be allocated and shared amongst the participating CNM customers, as well as the technology for performing these processes. These requirements should account for the fact that different rate classes may be involved and how this impacts the process for allocating energy credits. The rules for transferring credits should be simple and easy to implement to minimize administrative burden. The CNM billing model should provide a kWh credit for commodity and Global Adjustment charges only. There should be no credit for delivery (transmission or distribution) charges since infrastructure must still be built to serve the CNM customers.
- *Net Metering Facility Obligations:* Requirements should be established for participating CNM customers that own and operate Net Metering Facilities and their liabilities to other participating CNM customers.
- *Distributor Liabilities:* What liabilities does the distributor have to the customers within the CNM arrangement?
- *Licensing:* What licensing requirements will apply to participating CNM customers that own Net Metering facilities and are now supplying energy to other participating CNM customers?

Utility Costs of Hosting CNM Demonstration Projects

In the Ministry's proposed CNM model, the lead CNM customer(s) has ultimate responsibility for the development and design of the CNM demonstration project. This includes building and operating the Net Metering Facilities, entering into a CNM agreement with the participating customers and providing settlement and billing services to sub-metered CNM participant customers (if necessary). A distributor is not required to provide any of these services to a CNM demonstration project.

It is expected that a distributor hosting a CNM demonstration project will incur costs in creating new settlement and billing processes related to the CNM agreement. The costs involved in building out the new settlement and billing processes is likely to depend on the scale and complexity of the CNM arrangement, the method and process for transferring credits from Net Metering Facilities to participating CNM customers and any other administration requirements. The distributor may also incur costs in establishing the terms and provisions of a new Net Metering agreement that will need to be entered into with each of the participating customer accounts, in accordance with the terms of the CNM demonstration project agreement. Hydro One recommends that the Ministry provide further clarification as to how these costs will be recovered. Likewise, it remains unclear what activities a distributor is expected to perform in terms of reporting on the effectiveness of a CNM arrangement.

Minimizing Cross-Subsidization

It is expected that customer-led CNM demonstration projects will be configured to benefit the customers participating in the project and will provide limited benefits to the system or ratepayers. It is also expected that distributors may incur costs related to the implementation of CNM demonstration projects. Therefore, when selecting the CNM demonstration projects that should be granted approval to proceed, priority should be given to those projects that would require minimal subsidization from other ratepayers.

Hydro One notes that some CNM demonstration projects could necessitate modifications to the distributor's distribution system that would be classified as Renewable Enabling Improvements (REI) under Section 3.3.2 of the Distribution System Code (DSC). The costs associated with performing REI work

are borne by the distributor and passed on to ratepayers. Depending on the size of the facility and other factors related to its connection, a Net Metering Facility connection could trigger substantial REI work and costs. It should also be noted that the DSC does not establish any limit on the cost of the REI work required to connect a renewable generation project. Similarly, this work may be undertaken without any specific evaluation of the value or benefits to ratepayers, who will bear the costs. Therefore, in assessing whether a CNM demonstration project should proceed, the Ministry should give consideration to the cost of any REI work that must be performed.

In accordance with Section 3.2.5 of the DSC, CNM demonstration projects would also be eligible to receive the renewable energy expansion cost cap credit (which is based on the size of the facility) towards any expansion work that is required to connect the project. Like REI work, the renewable energy expansion cost cap credit is funded by ratepayers through distribution rates. The subsidization of this credit by ratepayers can be minimized by imposing restrictions on CNM demonstration projects based on size and the expansion work required to connect the Net Metering Facilities.

Ensuring Customer Protection

The proposal states that any sub-metered customers who are part of a CNM demonstration project must be protected in accordance with the *Energy Consumer Protection Act*, the Unit Sub-Metering Code and any other applicable codes and rules. It should be noted that if a bulk-metered customer provides settlement and billing services to sub-metered customers under a CNM arrangement, a distributor is unable to discuss any service-related issues with a sub-metered customer under such an arrangement even though the distributor is still providing distribution service to all sub-metered customers through the bulk meter connection point. The Ministry should clarify what liabilities a distributor would have to a sub-metered customer in such an arrangement and what measures will be put in place to protect sub-metered customers.

While it is important that provisions exist to protect sub-metered customers in any CNM project arrangement, it is equally important to ensure that all participating CNM customers in a CNM arrangement are protected. In the proposed CNM model, not all participating CNM customers need to act as host facilities of a Net Metering Facility. To ensure that the interests of all CNM customers are sufficiently protected, CNM agreements should include mandatory terms, which clarify the obligations and liabilities that customers with Net Metering Facilities have to other customers. Based on the proposed CNM model, the lead CNM customer(s) of the CNM demonstration project is responsible for establishing and executing a CNM agreement with the participating customer accounts. Since the CNM agreement will stipulate the credit sharing terms and rules of the CNM arrangement, there should be some oversight of the agreement terms, which ensures that all participating customers will be protected. It is important for the Ministry to standardize certain aspects of the CNM agreement to protect all participating customers.

Definition of Community

The primary objective of the proposal is to enable communities to participate in net metering initiatives and arrangements, which would help lower the community's costs and meet its sustainability goals. However, the proposal does not include a definition of a "community", nor does it specify which types of load facilities would constitute a community project. It is recommended that the Ministry should provide additional guidance to CNM demonstration project applicants, which clarifies the account eligibility requirements.

Transition from Demonstration

The Ministry should give consideration as to how CNM demonstration projects will be transitioned following the demonstration period. The experience gained from the demonstration period may indicate that a customer-led CNM arrangement is problematic or additional regulatory amendments are required. What implications does this have for the continued operation of the CNM demonstration project?

For Hydro One to fully assess and evaluate the potential costs, impacts and issues related to a CNM arrangement, further details need to be provided regarding the proposed regulatory framework that would support the implementation of CNM demonstration projects. Once these have been established, Hydro One would encourage the Ministry to provide stakeholders with another opportunity to comment on the revised proposal. Please do not hesitate to contact me if you have any questions or would like to discuss our recommendations in greater detail.

Best Regards,

A handwritten signature in black ink, appearing to read "Dan Levitan", with a stylized flourish at the end.

Daniel Levitan