



November 20, 2020

Cassandra Rosen  
Ministry of Energy, Northern Development and Mines  
Conservation and Renewable Energy Division  
77 Grenville St., 5th Floor  
Toronto, ON M7A 2C1

Dear Ms. Rosen,

**Re: ERO Number: 019-2531  
Environmental and Regulatory Registries of Ontario Posting  
Changes to Ontario's Net Metering Regulation to Support Community-Based  
Energy Systems  
ENWIN Utilities Ltd. Comments**

On October 8, 2020, the Ministry of Energy, Northern Development and Mines ("MENDM") posted a notice on the Environmental and Regulatory Registries of Ontario, proposing changes to Ontario's Net Metering Regulation (O. Reg. 541/05), made under the *Ontario Energy Board Act, 1998* (the "proposed amendments" or "proposal").<sup>1</sup>

The amendments would allow for the demonstration of community net metering projects. The MENDM noted that by building on the current net metering framework, community net metering could support the development of innovative projects, such as net-zero communities using distributed energy resources ("DERs"). The MENDM stated it would intend to monitor and evaluate the performance of the demonstration projects to inform future policy development, and that enabling these demonstration projects could also help define regulatory challenges for net metering at a community level, informing the MENDM and the sector about how larger net metering projects could provide capacity relief to the grid, or potentially, avoid costly upgrades by integrating distributed energy resources.

The MENDM requested comments from stakeholders on the proposal by November 22, 2020.

These are the comments of ENWIN Utilities Ltd. ("ENWIN") on the proposed amendments. ENWIN has also reviewed the comments of the Electricity Distributors Association on the proposed amendments, and is generally supportive of those comments, while expanding on areas of particular interest to ENWIN in the comments below. As the details of the specific changes to O. Reg. 541/05 have yet to be released, ENWIN notes that its thinking on these matters may evolve as further information becomes available leading to the finalization of the regulatory amendments.

ENWIN also acknowledges that while the proposed amendments are only related to the potential for demonstration projects at this time, it has been noted in the proposal that the demonstration projects may form the basis for future policy development. Therefore, ENWIN has also offered commentary on potential items that may require consideration prior to future wide-scale deployment of these projects.

---

<sup>1</sup> <https://ero.ontario.ca/notice/019-2531>

## **Background – ENWIN Utilities Ltd.**

ENWIN owns and operates the electrical distribution network in the City of Windsor, encompassing a service area of approximately 121 square kilometres. ENWIN is a transmission-connected local distribution company, serving approximately 90,000 residential and business customers as of the end of 2019.

While comprised of primarily residential and small commercial customers, ENWIN's customer base is diverse. ENWIN serves several large use customers in its territory, each with individual monthly peak demands exceeding 5 MW. ENWIN also has approximately 784 FIT and Micro-FIT customers connected in its service area, as well as over 20 customers who are net metered and governed under the current net metering requirements specified in O. Reg. 541/05. ENWIN also has existing customers in its service area with significant behind-the-meter generation, as well as battery storage.

Therefore, based on its diverse customer base, ENWIN has garnered unique experiences to date in the complexities (both operational and otherwise) of having significant generation capability embedded within its service territory, as well as the opportunities and challenges these projects create.

## **Comments on Proposed Amendments**

### **Operational Impacts and Recovery of Costs to Provide Service**

The proposal outlines that under a net metering arrangement, a community would generate electricity from a renewable source for their own use, while still drawing electricity from the grid when needed. Net metering arrangements also send generation exceeding the community's needs to the grid in exchange for credits that are applied to energy consumed from the grid. Therefore, it is clear that net metering arrangements involve the two-way flow of power between the net metered customer(s) and the local distribution company ("LDC"), where the existing LDC grid acts as a "buffer" on an instantaneous and as-needed basis. While this is indeed the case today for existing net metering arrangements with individual customers, there is potential for this to occur on a much larger scale where entire communities are setup to operate under these same parameters.

It is clear that net metering activities, including those potentially contemplated in the proposed demonstration projects, are not simply activities that occur behind the meter, as they have a direct impact on the existing and future operations of LDCs. These impacts must be acknowledged and considered in the design of regulatory changes that are intended to further facilitate the pursuit of these arrangements, as impacts that may be manageable on a smaller scale today, may not be so on a larger scale in the future.

At the outset, ENWIN notes that the further proliferation of DERs within LDC service territories can create opportunities, such as leveraging the existing grid as a platform to provide new ancillary services to project proponents and existing customers, and also contributing to

economic efficiency, continuing to utilize existing infrastructure to the extent possible. In the proper situation, DERs can also have the potential to cost-effectively avoid the need for certain system expansions or reinforcements, and can continue the province on a path towards innovation and pursuit of new technology for the benefit of all Ontarians. Net metering arrangements may also offer economic alternatives to continue to utilize existing assets which operate under Micro-FIT or FIT contracts as these contracts expire. LDCs or their affiliates may also be able to participate in the delivery of these technologies and services as the needs and service models become more mature.

However, the pursuit of opportunities must be balanced against the existing constraints of the LDC grid, and the paramount concern of continuing to provide safe and reliable service that customers have come to know and expect at a reasonable cost. These basic attributes of strong utility service cannot be taken for granted, nor can it be assumed that they will continue to endure by default as new technologies and projects alter the existing design and operations of the system. New technology should be pursued where appropriate, but it must be done in a measured manner where the existing fundamental attributes that customers continue to value and expect can be maintained.

ENWIN notes the following examples of operational issues that arise and must be considered when contemplating larger-scale DER projects (including community-based net metering) within LDC service territories, and related issues pertaining to cost responsibility.

- As noted above, the existing LDC distribution grid is required to facilitate net metering arrangements – both absorbing excess generation in real time, and supplying power when generation is not sufficient. These swings are not inconsequential, and can have real impacts on utility planning to ensure the continued safety and reliability of the grid. While the proposed amendments state that net metering agreements will be put in place, describing the roles, responsibilities, and obligations between the utility and lead community net metering customer, there currently is not specific clarity on what the expectations and responsibilities of either party will be in relation to these projects.
  - It is assumed that the continued ability for the LDC to accept excess generation and standby as a provider of last resort will be expected, as is the continued safety and stability of the grid to provide service to existing customers. However, as these new projects may have a direct impact on these fundamental utility attributes, they warrant specific attention and acknowledgement when the proposals are being designed.
  - The LDC's role in facilitating and operationalizing these arrangements must be directly considered in the formation of regulatory changes, as fundamental system constraints, such as access to the grid and optimal location of DERs, and the need for sound utility practice may impact which projects can be pursued in a particular area, and to what scale.
- The details of the mechanism for net metering customers (or other DER proponents) to pay for their use of the distribution grid for the services it provides is also required.

- Traditional means of distribution system cost recovery based on electricity consumed or peak demand supplied from the grid alone may no longer be a sufficient proxy to rely upon for recovery of the cost of operating the LDC grid in an ever-emerging world of two-way power flows.
- While ongoing baseload consumption and demand from the grid has the potential to be lessened as a result of these projects, the operational demands a project places on the grid, and the need for its resilience and flexibility, may actually increase. The rate design and means of utility cost recovery do not as yet contemplate this change in use, however.
- As these new projects would largely not be feasible without the existing grid being in place to provide these services, an evolution in the manner in which a utility recovers its cost of providing service may need to be pursued. Examples of such evolutions could be the design of capacity reserve or standby charges, which would be aimed at ensuring that cost responsibility is appropriately assigned to all users of the LDC system, even if that intended use is in a different manner than in the past, or different among different types of customers. The costs of maintaining the LDC grid and setting aside capacity to supply service to a net metered customer on an as needed basis, for example, are largely the same as if that same capacity were set aside and utilized to provide service each day. Therefore, a shift may need to occur in electric LDC remuneration, where customers pay for “access” to the grid and its available capacity, rather than solely based on actual utilization.
- This approach is not uncommon, and is similar to the way many larger natural gas customers pay for access to utility and pipeline capacity in Ontario today.
- Ultimately, there cannot be an implicit assumption that the resilience and stability of utility service and universal grid access will continue to be provided in all circumstances absent appropriate arrangements to ensure that commensurate fees are in place for the provision of that service.
  - While these projects may continue to facilitate different uses of the traditional LDC grid, it must be ensured that all users are aware of their cost responsibilities, and pay their fair and appropriate share of the costs for the services it intends to rely upon.
  - These items need to be dealt with directly to ensure it is clear to project proponents, LDCs and end-use customers what each other’s responsibilities are, and the costs that will be involved to provide and receive such services.
  - Additionally, technical requirements limit DER generation to areas of the grid where the physical network can accommodate that generation. From time to time, there will be interruptions to the physical network that will see portions of the grid served from “off-normal” supply in order to maintain reliability of service to load customers. In these cases, it may be necessary that generation to the grid is suspended until the system can be brought back to “normal” supply. LDCs must be able to effect control of these generators remotely, have rights to curtail or modify their generation to the grid and not be obligated to keep

generators whole for the lost opportunity to generate. In fact, providing utilities with control of those generators connected to their grids will facilitate a higher level of generator penetration on the grid. It is suggested that costs for this control should be borne by those benefiting from the opportunity to generate and move power onto the existing grid. For clarity, currently mandated “must take” generation contracts significantly limit the number of generators and the amount of generation which can safely be connected to the grid.

### Incremental Line Losses

The proliferation of the two-way flow of power also has the potential for additional operational impacts on line losses. When net metered customers push excess generation to the grid through utility transformers, or withdraw power from the grid through utility transformers, losses occur as a result of the transformation. To the extent these two-way power flows happen frequently, there is potential for incremental losses compared to those that would have occurred in the normal course through traditional one-directional power flows, which may be in excess of the amounts allowed for in the application of existing LDC loss factors to the load consumed from the grid by a net metered customer.

Consideration of these incremental losses may need to occur, and methods developed to adjust for them, considering the various metering and transformer combinations that may ultimately be put in place for a particular project. The results of these two way power flows should not necessarily be assumed to occur on an “as usual” basis, and should be factored in not only to billing / settlement requirements, but also the economics of the projects.

### Billing and Account Management Considerations

Based on the proposal, for the demonstration projects, it appears that the behind-the-meter calculation and sharing of generation credits will be facilitated via a Unit Sub-Metering Provider (“USMP”). The LDC relationship would therefore be held with a single master consumer (or “lead consumer”), who is the proponent of the community net metering project.

As an initial matter, ENWIN supports the general concept that the utility relationship should be held with a single entity, with subsequent underlying relationships taking place between the lead consumer and the individual community participants, possibly facilitated by a USMP. This view is under the assumption that although the utility relationship will be held with a single customer, there will still be the ability to ensure that the total costs of providing service to all participants within the project are recovered as appropriate. This structure will help to keep the responsibilities and lines of communications clear, and also facilitate the proposed reporting requirements in an organized and logical fashion.

However, ENWIN notes that there are several practical considerations the billing and account management arrangements for community net metering projects create. These are in addition to

those created by the virtual sharing of credits amongst customers, some of who may not be in the same rate class or pay commodity costs in the same manner.

Therefore, ENWIN offers the following comments on these aspects of the proposal, although it is unclear at this time to what extent the LDC may be involved in administering them.

- Under the current O. Reg. 541/05 billing requirements, generation credits are calculated on the same basis as the eligible generator's consumption of electricity, but not demand for electricity.<sup>2</sup>
  - Customers within a rate class may also pay for the electricity commodity in different manners (e.g. Regulated Price Plan vs. Hourly Ontario Electricity Price and Global Adjustment), and customers in different rate classes may have a different mix of fixed, consumption and demand based charges intended to recover the distribution costs of the LDC, amongst other pass-through costs.
- From the outset, even today, the existing method in which generation credits are established pursuant to O. Reg. 541/05 has the potential to create discrepancies between customers in different rate classes, as customers in a consumption-billed (i.e. kWh) rate class have the potential to receive more benefit from net metering arrangements than those in a demand-billed (i.e. kW) rate class.
  - The commensurate impact on LDCs may also therefore vary depending on the type and rate classification of a customer pursuing a net metering project, even though their reliance on the grid may be the same.
  - For example, a proponent may be incented to form several smaller projects where the master consumer is in a consumption-billed rate class (e.g. General Service < 50 kW), rather than a single larger project, where the master consumer would be classified in a demand-billed rate class (e.g. General Service > 50 kW).
- Further, to the extent sharing of credits is to be considered across different types of customers within a community (e.g. amongst residential customers and small businesses), consideration must be given to how this is to be done in a fair and equitable manner.
  - For example, if credits are calculated based on the master consumer who is a demand-billed customer paying the Hourly Ontario Electricity Price and Global Adjustment for electricity, those credits may not be easily allocated to a Residential customer within the community who is traditionally billed based on consumption and at Regulated Price Plan rates.
  - However, as the community members are assumed to be billed under a USMP arrangement for the purposes of these demonstration projects, the above concern is lesser than if the credits were to be shared amongst customers who also remained individual customers of the LDC, and were billed as such.
- The mechanisms for calculating and sharing such credits also need to be developed, and Customer Information Systems ("CIS") would need to be set up to facilitate the

---

<sup>2</sup> O. Reg. 541/05, Section 8. (2).

calculation of these credits, in addition to the subsequent allocation and tracking of credits across different customer groups.

- Therefore, more definition will be required regarding the specific methods required for credit calculation and sharing, and time must be allocated for CIS's to be programmed to facilitate it, which would also likely lead to incremental costs, as this functionality is not currently contained within existing systems.
- Additionally, as community net metering installations proliferate on a distribution system and as customers move or change their share of the community project, if settlement of credits is a responsibility of the LDC, then the LDCs will need to add staff to receive, vet and implement changes in the billing systems to accommodate changes in the community customer base. ENWIN suggests that these costs not be socialized to customers that are not participating in community net metering arrangements.
- ENWIN also notes that the sharing of credits should also be limited to customers within the same demonstration project, and to customers served by a single LDC, to minimize the reach of the above-noted complexities at the demonstration project stage.
- Rate classification of the master net metering customer for the project must also be considered, in addition to the overall impact of the utility relationship changing from many one-to-one relationships with individual consumers, to a single relationship with the master consumer.
  - Under a community net metering project, a utility may now only hold a single relationship with one consumer, in place of what historically would have been many relationships with individual customers.
  - Depending on the physical power flows and the overall impact on consumption and demand, the community as a whole may still rely on the distribution system the same amount, albeit in a different fashion (i.e. the nature of the needs they place on the distribution system may be different than what would have been the case historically, such as baseload supply vs. backstopping, but their overall need for the system being there is still the same).
  - A customer's ability to transition in or out of a community net metering project, such as transitioning into an existing project or exiting and returning to standard utility service, and the rules that govern this, would also need to be carefully considered.
  - This evolving relationship, its impacts on the rate classification of the master consumer, and also the impact of the lost relationships with individual consumers, must be considered in the design of the regulation, as the traditional means of rate recovery using fixed and volumetric charges applied to supply taken from the grid may no longer be sufficient in all circumstances to recover the same amounts of costs. As these impacts become more extensive, they may also impact LDC's ability to access capital at favourable rates and the potential for optimal use of existing assets.

## **Alignment with Ongoing Ontario Energy Board Consultations**

As can be seen by the above, there are many foundational items to be considered before widespread adoption of DERs can be pursued with confidence in Ontario – these concerns range from those of project proponents, end-use customers, and LDCs.

ENWIN acknowledges that not all of these questions can be contemplated in the formation of the present regulatory amendments to facilitate community net metering demonstration projects, and that the pilot projects envisioned can create opportunities for some of these items to be identified and addressed on a proactive basis.

However, ENWIN notes that several of the overarching questions that remain unanswered at this stage are indeed the focus of presently ongoing Ontario Energy Board (“OEB”) consultations, the focus of which are primarily related to enabling DERs in Ontario.

These consultations are at various stages of maturity, with some having OEB Staff reports issued, while others are nearer the beginning and undergoing the scoping phase.

A brief summary of these consultations is provided below:

- EB-2019-0207 – DER Connections Review
  - An initiative to review requirements in regard to the connection of distributed energy resources (DERs) by licensed electricity distributors.
- EB-2018-0287 - Utility Remuneration
  - Consultation to identify how to remunerate utilities in ways that make them indifferent to traditional or innovative solutions, better supports their pursuit of least cost solutions, strengthens their focus on long-term value and requires them to reflect the impact of sector evolution in their system planning and operations.
- EB-2018-0288 - Responding to Distributed Energy Resources
  - Consultation to develop a more comprehensive regulatory framework that facilitates investment and operation of DERs on the basis of value to consumers and supports effective DER integration so the benefits of sector evolution can be realized.
- EB-2015-0043 - Rate Design for Commercial and Industrial Customers
  - Consultation on rate design for commercial and industrial electricity customers. As part of this consultation, the OEB’s February 21, 2019 Staff Report included the potential for a “Capacity Reserve Charge”, intended to ensure that customers continue to pay for capacity on the LDC system that is intended to serve them.

As is evident from the above, the OEB is currently undertaking multiple initiatives in an attempt to establish an overall framework for how DERs should be enabled and responded to in the Ontario context, addressing the key concerns of all stakeholders. Recently, individual expert



studies have also been commissioned to enable appropriate scoping and assessing next steps.<sup>3</sup> These consultations are admittedly complex, encompassing a wide range of views and items for consideration, across a spectrum of issues from physical system operation to billing, administration, and LDC remuneration. The consultations, by design, are focused on providing an appropriate forum to gather input from all industry participants before overarching policy direction is provided.

While ENWIN acknowledges that the present proposal is focused only on demonstration projects, ENWIN seeks clarity on how these existing consultations are linked to the present amendments, which are designed to facilitate the pursuit and piloting of specific projects. ENWIN believes that any regulatory amendments that are made to O. Reg 541/05 should not serve to pre-determine or constrain the outcomes that may be derived from the above-noted consultations, as many of the questions that are the focus of these consultations remain unanswered at this time.

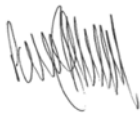
### **Conclusion**

ENWIN appreciates the opportunity to provide comments on the proposed amendments. As stated above, ENWIN appreciates the potential opportunities and benefits associated with furthering the proliferation of DERs in Ontario – however, ENWIN notes that the pursuit of these benefits must be balanced against ensuring the continued safe and reliable operation of the grid that customers have come to value and expect. Each participant in these projects must also know the rules these arrangements will be governed by. Overall, enabling further DER deployment must be done in a manner that is comprehensive and considers all relevant factors, ensuring that the overarching framework is established before specific, large-scale proposals are advanced.

Should you have any questions, please do not hesitate to contact the undersigned.

Yours very truly,

ENWIN Utilities Ltd.



Paul J. Gleason, BA, LL.M.  
Director, Regulatory Affairs & Corporate Secretary

---

<sup>3</sup> OEB September 24, 2020 Letter, Utility Remuneration and Responding to Distributed Energy Resources Board File Numbers: EB-2018-0287 and EB-2018-0288, COVID-19 and DER Impacts Studies.