

Draft based on draft materials- Net Metering Enhancements

CAB	LRC	CAB	Introduction	Royal Assent	LRC	Effective
Jul. 26, 2017 (LTEP)	Sep. 25, 2017	Oct. 4, 2017	Nov. 14, 2017 (Bill 177)	Dec. 14, 2017	Apr. 16, 2018	Oct. 1, 2018

Summary of Proposal

The following proposal is consistent with current government direction. [TBC]

Context for Decision:

The ministry has been conducting an update of the net metering framework over the past year and a half and has been engaging with stakeholders, sector participants, and Indigenous communities to inform the process. An amended Net Metering Regulation came into force July 1, 2017, which included removal of the 500 kilowatt (kW) project size limit, and clarified the eligibility of energy storage paired with renewable technologies, among other things.

This proposal follows Cabinet direction to expand net metering to allow third-party ownership models and virtual net metering demonstration projects. To enable the implementation of this direction, the ministry prepared legislative amendments for the Ontario Energy Board Act, 1998, which received royal assent December 14, 2017 (through Bill 177, *Stronger, Fairer Ontario Act (Budget Measures), 2017*).

Proposal:

To continue to the implementation of the above direction, the ministry is now proposing the following:

1. Amendments to the Net Metering regulation (O. Reg. 541/05) expanding net metering eligibility to include new third party ownership models;
2. Amendments to the General regulation (O. Reg. 389/10) under the *Energy Consumer Protection Act, 2010* to ensure appropriate consumer protections are in place for the new third party ownership models; and
3. A new regulation under the *Electricity Act, 1998* to ensure appropriate siting restrictions are in place.

The proposal, if approved, the proposed new regulation under the *Electricity Act, 1998* would come into effect on July 1, 2018 and proposed amendments to O. Reg. 541/05 and O. Reg. 389/10 would come into effect October 1, 2018.

Why does Ontario need these changes? Why now?

During stakeholder consultations which supported the regulatory amendments that took force on July 1, 2017, Third-party Ownership and Virtual Net Metering emerged as two potential areas for further enhancements to Ontario's net metering framework. The Feed-in-tariff (FIT) and microFIT programs ended in 2017, which makes Net Metering the primary mechanism to develop renewable distributed generation in Ontario.

Enabling Third-party Ownership and Virtual Net Metering (VNM) demonstration projects would also support objectives of the Climate Change Action Plan (CCAP) by facilitating net zero building goals and reducing greenhouse gas emissions from the electricity sector as well as supporting improvements to air quality (e.g. reduced smog) through increased use of renewable energy.

The proposed regulation under the *Electricity Act, 1998* is necessary to ensure that renewable energy projects are appropriately sited. The *Green Energy and Green Economy Act, 2009* removed municipal planning authority over renewable energy projects. The sole levers to control siting became environmental regulation and the IESO's Feed-In Tariff (FIT) and microFIT program rules, and later, the Large Renewable Procurement (LRP) process. Residential and agricultural restrictions do not exist for net metering, or other projects developed outside of procurement processes.

Ontario's existing consumer protection framework does not fully capture this new type of energy retailing activity. The proposed changes are designed to ensure consumers considering entering an agreement under the third-party ownership model can make an informed decision and have appropriate protection.

How will this proposal impact Ontario?

The changes would facilitate a variety of benefits to Ontario businesses and electricity consumers by increasing options to participate in the generation of electricity and save on their electricity bills, expanding opportunities for installers, developers, and local distribution companies to provide distributed energy solutions to customers, reducing demand on the grid, and providing opportunities for Indigenous communities. Electricity distributors are the primary stakeholder group that could be impacted by the proposed measures. However, the ministry advises that the proposal is not expected to have a significant overall impact on distributors.

The ministry anticipates that distributors would incur administrative costs associated with implementing third party ownership including learning about the regulation and other administrative activities involved with reviewing new standard acknowledgement requirements for net metering agreements. The ministry has estimated total annual costs per distributor to be approximately \$7,035.00.

There will also be costs to businesses seeking to utilize the new third party ownership models. These costs are related to becoming licensed and operating as an electricity retailer. The initial licensing fee is \$1,000 for a new electricity retailer licence (generally a five-year licence is issued). The renewal fee is \$200. A licensed retailer must also pay an \$800 annual registration fee. In addition, electricity retailers must ensure their staff is trained to understand and comply with the OEB's Electricity Retailer Code of Conduct. There are no mandated training courses a retailer or their staff must complete.

There will also be costs to project proponents to comply with the new siting requirements. To independently hire a Registered Professional Planner and licensed surveyor to certify that the regulatory requirements are met for a single project, a project proponent would likely need to pay a minimum of \$2,000. In some cases these costs could escalate if additional work is required due to a complexity in the existing documentation related to a property

What is the expected cost to government?

The proposal has no incremental costs to government and electricity rate impacts are expected to be negligible based on projected net metering uptake. At the levels of uptake projected (468 MW cumulative total from 2018-2027), the expected difference in net system costs (costs less benefits) under the net metering scenario is about \$40 M per year on average over the 2018-2035 period when compared to a baseline scenario with no net metering (translating to an average percent difference in net system costs of 0.18%).

What are the key steps to deliver this proposal?

- Summer/Fall 2018 – OEB to undertake consultations on code/licensing changes required to align with new regulation.
- July 1, 2018 -- The new regulation under the *Electricity Act, 1998* come in force.
- October 1, 2018 –Regulatory amendments to O. Reg. 541/05 and O. Reg. 389/10 come in force.
- Fall/Winter 2018/2019 – IESO to begin accepting applications for VNM demonstration projects under the Renewable Distributed Generation Integration Fund (RDGI Fund).
- Winter 2019 – IESO to announce successful VNM demonstration projects.
- Winter 2019 – Monitoring and evaluation of implementation by distributors, OEB, and the ministry (ongoing).

How will the changes be communicated?

The ministry is recommending a low-profile, targeted approach to communications of the proposed regulatory measures. QAs to be prepared to respond to any questions from stakeholders, media and public.

Terms you need to know

- **Net Metering** – Net metering is a billing arrangement that allows customers to generate renewable energy onsite, and to receive bill credits for any electricity that they send to the grid in excess of their own demand. Under the current net metering framework, customers are required to own or operate the renewable energy generation facility that generates electricity for the customer's own use in order to be eligible.
- **Ontario Energy Board (OEB)** – A Crown Agency that independently regulates Ontario's electricity and natural gas sectors in the public interest. Implements an open and transparent process to allow for stakeholders to comment on various items.
- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Independent Electricity System Operator (IESO)** – An independent corporation and agency of the Ministry of Energy that operates the electricity market in Ontario. Balances the supply of and demand for electricity in Ontario and then directs its flow across the province's transmission lines, including interties with other jurisdictions.

Cabinet Office Analysis

The proposal is consistent with current government direction [TBC].

Introduction:

The proposal was initially announced through the province's 2017 Long-Term Energy Plan (LTEP), released in October 2017. The proposal supports key themes of the 2017 LTEP, by supporting innovation in the areas of renewable energy and storage, as well as providing enhanced choices for electricity consumers.

Proposal:

The ministry is proposing the following amendments to regulation under the *Ontario Energy Board Act, 1998* (OEBA), the *Energy Consumer Protection Act, 2010* (ECPA), and new regulation under the *Electricity Act, 1998* (EA):

1. *Amendments to the Net Metering regulation (O. Reg. 541/05) under the OEBA to:*
 - Require distributors to offer net metering to a customer with a Third-Party Ownership (TPO) net metering arrangement, where the customer has entered into an agreement with a third party for electricity purchased from a renewable energy generation facility owned and operated by the third party.

- Enhance consumer protection for customer-owned or operated net metering arrangements by requiring distributors to receive a standard set of acknowledgements from customers applying to become net-metered generators. Customer-owned or operated net metering arrangements do not fall under the proposed TPO model. The proposed requirement would ensure that if the customer has contracted for the generation equipment under a lease or financing arrangement, they have had information disclosed to them important for making an informed decision about the lease or financing arrangement.
 - Prescribe certain criteria for VNM demonstration projects, while other criteria would be addressed through the IESO's Renewable Distributed Generation Integration Fund (RDGI Fund). The key parameters of VNM projects addressed through the proposed regulation include:
 - Projects could only proceed if selected through the IESO's RDGI Fund competitive process;
 - Generation must be from a renewable energy source;
 - Electricity distributors would be permitted to facilitate VNM projects but not be obligated to participate or host projects; and
 - VNM demonstration projects would also be required to adhere to certain other provisions in the proposed regulation, such as contract terms, compensation/ credit valuation and how agreements are structured (e.g., power purchase agreements).
2. *Amendments to the General regulation (O. Reg. 389/10) under the ECPA to:*
- Align consumer protections under the ECPA with the TPO models being enabled under proposed amendments to the Net Metering regulation.
 - Require TPO retailers to adhere to the same rules currently in place for energy retailers, including:
 - TPO retailers would be licensed and regulated by the OEB and required to follow a comprehensive Code of Conduct.
 - TPO retailers would be required to provide detailed disclosure of the terms of the contracts to consumers, offer a 10-day “cooling off” period to cancel contracts and be prohibited from making false or misleading statements.
 - In addition, proposed changes would harmonize existing measures with the TPO model to protect consumers further, such as specific modifying measures around cancellation upon moving, disclosure requirements around costs of a cancellation, recourse the OEB may take upon receiving a complaint and failure to disclose the required information.

3. *New Regulation under the EA to:*

- Introduce the following siting restrictions for non-rooftop solar and wind renewable generation facilities:
 - Non-rooftop solar projects would be required to be set back 15 meters from any property boundary, no matter the zoning of the property or abutting properties;
 - Non-rooftop solar and wind projects would not be permitted to be connected to residential dwellings; and
 - Non-rooftop solar projects larger than 10 kW would not be allowed in prime agricultural areas or in areas where the prime agricultural area designation process had not been completed.
- Under the proposal, relevant professionals (e.g. a Registered Professional Planner or a land surveyor) would be required to certify that the project meets siting restrictions as applicable. Individual project owners would be required to deliver the certifications to their electricity distributors as part of the generator connection process.
- The siting requirements would not apply to projects on First Nation reserves in recognition of the authority that First Nations have to make land use decisions on these lands.
- Projects that are already built, [that have a connection agreement](#), or that are contracted under previous procurement programs that included siting restrictions (e.g. FIT, microFIT) would not be subject to the siting restrictions in the proposed regulation. The regulation would also provide flexibility [in certain circumstances](#) for the siting of facilities approved as a VNM demonstration project under the IESO's RDGI Fund.

Risks and Considerations:

- Consumer Protection: As net metering activity increases and with the introduction of TPO, there is increased risk of consumer protection issues arising. As with many consumer transactions, it's important for consumers to have clear disclosure regarding cancellation rights, termination penalties and protection against misleading sales tactics. Under the proposal, the OEB would be required to expand its consumer protection oversight functions to include TPO net metering arrangements under the ECPA, as the sale of electricity by third party owners to customers would be considered a form of electricity retailing that would be subject to the ECPA. The ministry and the OEB will also collaborate with electricity distributors to enhance consumer education and consistency of net metering information available to the public.
- System Impacts: System impacts and the risk of unanticipated costs that could be passed on through rates will be closely related to the amount of net metered renewable generation capacity added to the grid over time (net metering uptake) and the ability to manage uptake in a way that maximizes value to the grid. The risk of

Commented [HT1]: Energy can you please confirm:
 - Surveyor or other relevant professional only required for non-rooftop solar project, right? (to check for set back)
 -Registered professional planner only required for non-rooftop projects larger than 10kW, right? (to check for prime ag land designation)

Commented [WB(2): CRED Response: That is correct, Tim.

With the small modification to your comment that only the surveyor can confirm the setback (i.e. Not other relevant professionals).

high unanticipated levels of uptake that could drive system costs are low due to the challenging economics of distributed solar energy under net metering in Ontario at current capital costs and electricity rates.

However, as solar costs continue to decline and with the expected introduction of incentives through the Green Ontario Fund, the business case for customers to invest in renewable generation for net metering will improve, driving increased uptake. It is possible in the medium to long-term (5-10 years) to reach levels of distributed generation penetration that would change the costs and benefit assumptions used to estimate the impact of net metering over time. The Canadian Solar Industry Association's (CanSIA) Distributed Generation Task Force Recommendation Report, released in 2016 before the implementation of Ontario's Fair Hydro Plan, suggested that solar PV will cost the same as grid supplied electricity (i.e. grid parity) in Ontario between 2022 and 2026.

As grid parity approaches, it is expected that instances of load defection will increase (customers self-supplying a portion of their electricity). In order to completely leave the grid (i.e. grid defection - customers leaving their LDC and self-supplying all of their required energy) grid parity would need to be reached for both generation technology (i.e. solar PV) AND energy storage. The risk of grid defection is not anticipated to be increased by the proposal as net metering requires customers to be connected to the grid.

The ministry is proposing a measured approach to net metering policy to mitigate the risk of unanticipated levels of net metering uptake and associated cost impacts. The ministry will undertake regular monitoring, review impacts of net metering, and take steps to propose adjustments to regulations as may be needed. As part of the initial updates to the net metering regulation introduced earlier this year, the ministry committed to undertaking a three-year cost-benefit evaluation of net metering in line with the LTEP cycle.

In addition, the Distribution System Code provides mechanisms to protect distributors, including technical and financial limits on net metering. Technical contingencies in place for LDCs allow them to reject applications to connect generation based on equipment safety and reliability standards. Technical limitations determine available connection capacity on any given feeder and vary with specific location.

- **LDC Capacity:** LDCs will need to be prepared for a potential increase in the number of entities applying for net metering due the ending of the FIT and microFIT Programs, and to the proposed regulatory changes. The ministry is proposing to mitigate this risk by giving LDCs sufficient time to modify their application processes, if required, and to accommodate potentially greater volumes of net metering as well as Third-Party Owned net metering.

Linkages:

Commented [HT3]: Is it possible that there could be a large number of potential net metering participants that will not be able to participate based on system limitation, that could then lead to frustrations and criticism? Could LDCs be criticised for not investing in certain infrastructure that would increase capacity in particular areas? Is there a regional angle to this question (i.e. north vs south)?

Commented [WB(4): CRED Response: While this would be possible, the risk remains consistent with the risk as it existed under the FIT and microFIT procurement programs that net metering replaces. Similarly, distributors perform connection assessments for net metering projects.

Generally speaking, there is less connection capacity to connect generation in the North vs the South due to lower amounts of load in the North than in the South.

Overall, the ministry does not anticipate there would be a high level of participation in the near term as the economics of net metering remain challenged.

- Long-Term Energy Plan (LTEP) – The LTEP is the energy sector’s roadmap and generally identifies the needs for investments over the shorter term, while broadly mapping out the direction of the energy sector over a 20 year timeframe. The province released the 2017 LTEP in October 2017.
- IESO’s Renewable Distributed Generation Integration Fund – A forthcoming IESO program to support a select number of innovative renewable distributed generation demonstration projects in order to gain direct experience with integration of distributed energy resources, refine methodologies for assessing value streams, and to inform the evolution of grid systems, processes, and practices. The RDGI Fund will be the mechanism used to select and support virtual net metering demonstration projects for deployment.
- Feed-in Tariff (FIT) Program – The FIT Program was launched in 2009 to encourage and promote greater use of renewable energy sources including on-shore wind, waterpower, renewable biomass, biogas, landfill gas and solar photovoltaic (PV) for electricity generating projects in Ontario. Participants are paid a guaranteed price over a 20-year contract term (40 years for waterpower projects) for the electricity they produce and deliver to the province’s electricity grid. Over 4,850 megawatts (MW) of electricity capacity has been contracted through the FIT program. The final application window for the FIT program was open from November 7 to November 25, 2016 resulting in 390 new contracts for 149.9 MW of renewable energy.
- microFIT – The microFIT Program supported the development of small or “micro” renewable electricity generation projects (10 kW or less in size) such as residential rooftop solar projects. Over 210 MW of electricity capacity has been contracted through the microFIT program. On December 1, 2017, the 50 MW procurement target for 2017 was reached and applications no longer being accepted for the program.
- Cleantech Strategy – The Ministry of Research, Innovation and Science (MRIS) launched a Cleantech Strategy on Feb. 13, 2018 to support the development of new, globally competitive low-carbon technologies that will reduce greenhouse gas pollution and fight climate change. The strategy is focused on four areas: venture and scale readiness support, such as improving access to global market intelligence; access to capital, including providing guidance on available provincial and federal cleantech funding and simplifying access; regulatory modernization, such as reducing barriers for cleantech market entry; and adoption and procurement, including increasing demonstration and pilot opportunities. The Cleantech Strategy would support both CCAP and the Business Growth Initiative.
- Climate Change Action Plan– Released in June 2016, CCAP reiterated the 2016 Budget commitment to greenhouse gas (GHG) emissions reductions and stated that Ontario intends to invest in initiatives that both reduce GHG emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers. CCAP included commitments to implement a number of policy initiatives, including reference to

support for community energy mapping and platforms for distributed generation opportunities, and the establishment of a new Climate Change agency (see below).

- **Green Ontario Fund** – GreenON is the agency committed to under CCAP that acts as one window for the delivery of climate change-related programs focussing on the reduction of greenhouse gas emissions from buildings (e.g., low-carbon technology and energy management and efficiency programs) and the production of goods. GreenON.ca was launched in August 2017 and MOECC is currently developing, in collaboration with the IESO, incentives for solar PV that would be delivered through the agency and have an impact on net metering uptake.
- **Environmental Activity and Sector Registry (EASR)** – The EASR is a simplified online self-registration process intended for activities that are routine, well understood and have minimal environmental impacts. As of November 18, 2012, certain small ground-mounted solar facilities must register in the EASR, as per O. Reg. 350/12.

Delivery:

The ministry will work closely with partner ministries, the OEB, the IESO, and external stakeholders including LDCs during the implementation of the regulatory framework.

Tracking Mechanisms

As a condition of license, under the OEB Distribution System Code and the OEB's Reporting and Record-Keeping Requirements, electricity distributors must report on net metering capacity and facilities annually. The OEB may choose to revise these reporting requirements based on the updated regulation (e.g., frequency of reporting or type of information collected). Electricity distributors are required to report their performance annually through a "performance scorecard" overseen by the OEB. The scorecard includes traditional metrics for assessing electricity distributor services, such as frequency of power outages, financial performance and costs per customer. It also includes metrics on the Connection of Renewable Energy Generation, including assessments and connections completed on-time. The ministry intends to track and assess the results from VNM demonstration projects through the IESO's RDGI Fund.

Performance Measurement:

The ministry will monitor and evaluate uptake of net metering (both standard and TPO models) based on data provided by LDCs and the OEB on an annual basis. The ministry will also monitor and evaluate the performance of proposed siting and consumer protection regulations via information supplied by the OEB including but not limited to, the instances and severity of consumer complaints against TPO retail companies, and, the instances and severity of complaints/objections to the siting of renewable energy generation facilities.

Stakeholder response:

Stakeholder engagement on the proposed regulatory changes leveraged previous consultation and engagement on net metering regulatory updates, which came into effect July 1, 2017. The ministry conducted additional stakeholder and Indigenous engagement related to the current proposed regulatory amendments and key policy

considerations for TPO and VNM in early 2017, which included engagement with the Advisory Working Group, a public webinar, a stakeholder questionnaire and targeted meetings with key stakeholders and Indigenous groups. The ministry also posted plain language proposals for the three regulatory measures to the Environmental Registry and Regulatory Registry on November 28, 2017 for a 50-day public comment period ending January 18, 2018. The ministry received a total of 45 stakeholder comments and submissions on the regulatory proposals and the feedback received was generally positive.

- *General public* – **Positive** – likely to support regulatory changes as they will increase choice and options for individuals who may want to participate in net metering but viewed the technical expertise or upfront capital cost required to participate as barriers.
- *Renewables sector* – **Neutral to Positive** – Strongly supportive of TPO and VNM models, but may be critical that, with the end of the FIT 5 and the microFIT programs, the net metering regulatory framework is the primary mechanism to develop renewable distributed generation in Ontario. Some advocated for the return of control over siting to municipalities.
- *ENGOS* – **Neutral to Positive** – Likely supportive of regulatory changes that will result in increased net metering, but may be critical that, with the end of the FIT 5 and the microFIT programs, the net metering regulatory framework is the primary mechanism to develop renewable distributed generation in Ontario.
- *Indigenous communities* – **Neutral to Positive** – Likely supportive of regulatory changes that will result in increased opportunities for net metering, but may be critical that, with the end of the FIT 5 and the microFIT programs, the net metering program is the primary mechanism to develop renewable distributed generation in Ontario.
- *LDCs* – **Positive** – LDCs are generally supportive of TPO and supportive in principle of VNM, and are likely to be supportive of the measured approach proposed.
- *Municipalities* – **Positive** – Likely supportive of the changes. Municipalities have previously indicated support for a restricted VNM (e.g. municipalities, universities, etc.). Some advocated for the return of control over siting to municipalities.