Ontario

MINISTRY OF
ENERGY

Net Metering Webinar Presentation:
Third-Party Ownership and Virtual Net Metering

2017-01-12

1. Introduction

1.1 Presentation Overview

1.2 Purpose of Webinar

1.1 Presentation Overview

1. Introduction
2. Background
3. Program Updates Under Consideration: Third-Party Ownership
4. Program Updates Under Consideration: Virtual Net Metering
5. Next Steps
6. Questions & Discussions

1.2 Purpose of Webinar

1) Present Ministry of Energy's plan for examining potential updates to the net metering program related to **third-party ownership** and **virtual net metering**, including opportunities for industry and government stakeholders, individuals and Indigenous communities and groups to provide their input; and

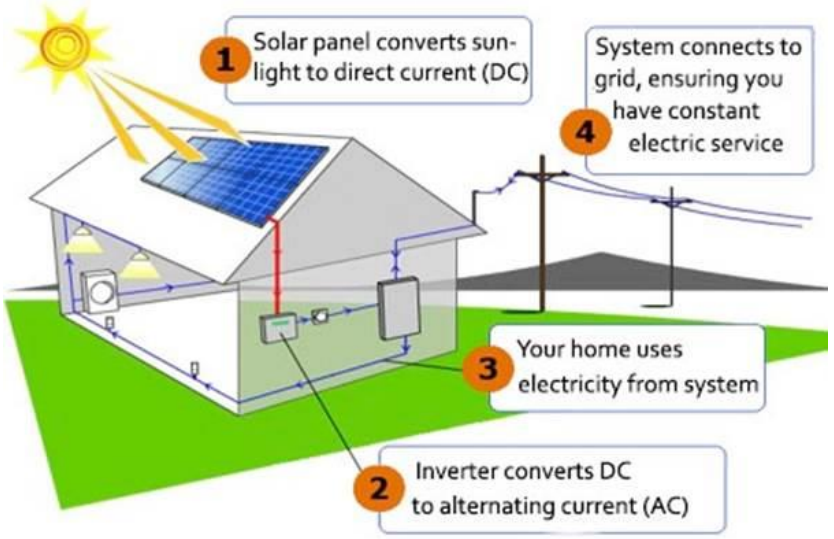
2) To provide an overview and examples of third-party ownership and virtual net metering models, to work towards a shared understanding for the subsequent engagement and feedback opportunities.

2. Background

2.1 Overview of Ontario's Net Metering Program
2.2 Context for Updating Ontario's Net Metering Program
2.3 Approach to Updating Ontario's Net Metering Program
2.4 Part 1 Proposed Program Updates
2.5 Part 2 Stakeholder Consultation and Indigenous Engagement

2.1 Overview of Ontario's Net Metering Program

- Under Ontario's net metering program, customers can generate renewable energy onsite for their own use, and receive bill credits for any surplus electricity sent to the grid.
- Ontario's Net Metering Regulation has been in place since 2005, and requires all electricity distributors to offer net metering to customers on request.
    - Electricity exported to the grid is valued at volumetric electricity rates (for residential customers, currently Tiered Pricing) and credited to the customer's electricity bill.
- Since the launch of the microFIT and FIT programs there has been relatively limited uptake of net metering, with distributors reporting a total of 9 megawatt (MW) of net metering capacity installed in 2015.



- A typical net metering configuration is illustrated above with renewable energy first consumed onsite, and any surplus generation is sent to the grid.
- The customer draws from the grid when their onsite needs are not met by the renewable system.

2.2 Context for Updating Ontario's Net Metering Program

- Ontario's 2013 Long-Term Energy Plan (LTEP) identified the opportunity to expand and enhance Ontario's net metering program, and committed to "examine the potential for microFIT to transition from a generation purchasing program to a net metering program."
- Between August and October 2015, ENERGY conducted initial stakeholder and public engagement on a program concept proposal, which included a background webinar, in-person sessions and a request for written feedback.
- Ontario established the following objectives for the updated net metering program:
    1) Reduce ratepayer costs associated with small-scale renewable generation, with the ultimate goal of achieving a self-sustaining program.
    2) Support Ontario's Conservation First policy by ensuring systems are right-sized and sited close to load.
    3) Reflect the costs and benefits of integrating net metered generation into the electricity system, and recover the costs efficiently and equitably.
    4) Continue to offer consumers choice to offset their load using renewable energy, subject to system need and cost considerations.
- The intent is to enable a long-term framework for the development of customer-sited renewable energy systems that aligns with value to the electricity system, while continuing to offer consumers choice to offset their load with renewable energy sources.

2.3 Approach to Updating Ontario's Net Metering Program

- The Ministry of Energy is taking a phased approach to updating Ontario's net metering program:

  Part 1 (Near-Term) Proposed Regulatory Updates Posted to the Environmental and Regulatory Registries in August 2016

  Part 2 (Longer-Term) Regulatory Updates Requiring Further Consultation/Study (i.e., third-party ownership and virtual net metering)

  - Third-party ownership and virtual net metering emerged during Summer/Fall 2015 net metering consultations as potential program enhancements requiring further consultation and study.
  - Specific areas of interest include:
    - Potential business models and project configurations;
    - Potential impacts to the electricity system, electricity distributors, and electricity ratepayers; and
    - Technical considerations to ensure alignment with program objectives.

2.4 Part 1 Proposed Program Updates

- The Ministry posted proposed amendments to the 2005 Net Metering Regulation (O. Reg. 541/05) on the Environmental and Regulatory registries (EBR Registry Number: 012-8435) from August 19, 2016 to October 6, 2016 for public review and comment.
- Proposed amendments to the Net Metering Regulation included:
  - Extending the credit carryover period to 12 months;
  - Allowing any sized renewable energy generation system, subject to the system being used primarily for the generator's own use;
  - Establishing a billing method for Single-Entity Virtual Net Metering

    (**Note:** Based on stakeholder feedback through the EBR registry, this proposed update was removed from the proposal for Amendment to the Ontario Net Metering Regulation. The Ministry updated the EBR registry on December 22, 2016, informing stakeholders of its intent to solicit additional feedback on design elements for Single-Entity Virtual Net Metering through this consultation process.);
  - Allowing for the use of energy storage when paired with renewable energy; and
  - Updating opt-in terms by allowing existing net metering customers to opt-in to the updated program.

2.4 Part 1 Proposed Program Updates

- In addition, the Ministry of Energy proposes to:
  - Undertake a cost-benefit analysis to determine whether investments in Ontario's Meter Data Management and Repository should be made to enable time-of-use (TOU) billing;
  - Improve the availability of net metering program information; and
  - Undertake a cost-benefit evaluation of the program every three years.
- The Ontario Energy Board (OEB) will also be exploring steps to facilitate the implementation of the updated program.
- Based on feedback received from the EBR posting, the Ministry will include both Single Entity Virtual Net Metering (SEVNM) and Multiple Entity Virtual Net Metering (MEVNM) in Part 2 consultations.

2.5 Part 2 Stakeholder Consultation and Indigenous Engagement

- The Ministry has committed to conducting targeted stakeholder consultation and Indigenous engagement on Part 2 items (third-party ownership and virtual net metering) in early 2017.
- Targeted stakeholder consultation and Indigenous engagement on Part 2 items will involve the following engagement activities:
  - **Advisory Working Group (AWG) engagement**
    - Includes representatives from industry, local distribution companies (LDCs) and agencies
    - Will advise Ministry on consultation materials and policy options
  - **Webinar – today's session**
    - Public forum for discussion of issues and opportunities for third-party and virtual net metering policies
  - **Questionnaire / Written Submissions**
    - Opportunity for stakeholders, Indigenous communities and the public to provide input
    - Broad scope of formal written feedback to inform policy development
  - **Additional targeted stakeholder and Indigenous engagement meetings as needed**
    - Seek detailed input on technical issues
    - Seek input from Indigenous communities and organizations

3. Program Updates Under Consideration: Third-Party Ownership

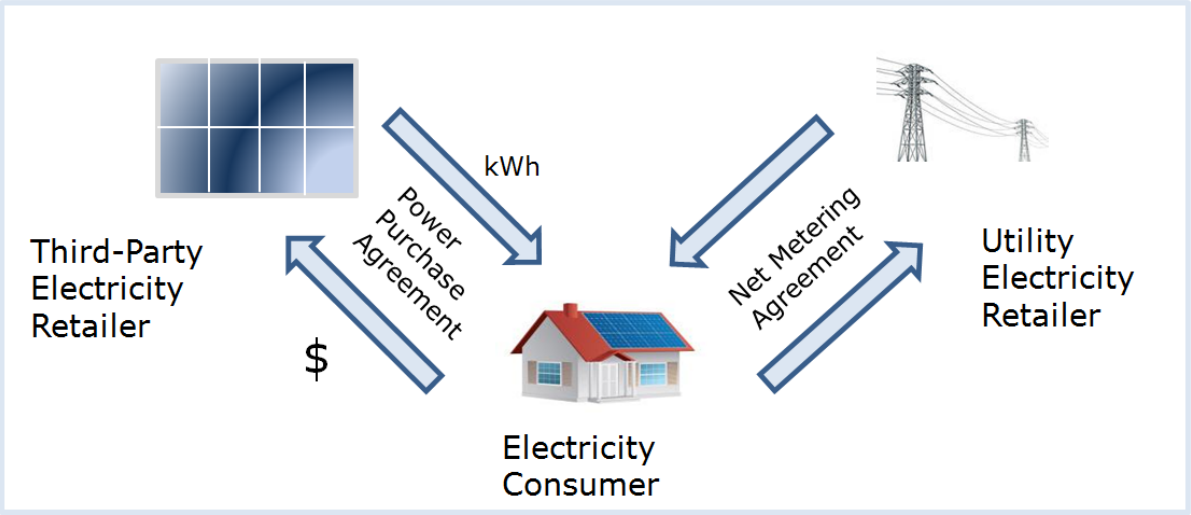
3.1 Third-Party Ownership Model

3.2 Third-Party Ownership in Ontario

3.1 Third-Party Ownership Model

How does it work?

- Stakeholders have expressed interest in third-party ownership models in which a third-party entity would ***own and operate*** a renewable energy system and sell renewable power to host customers (i.e. third-party electricity retailer).
- Under this arrangement, the Local Distribution Company (LDC) would maintain the same net metering terms with the host customer as for a standard net metering arrangement, where the home owner is the net metering agreement holder.
  - The consumer would draw any additional power required from the grid and maintain their LDC account. Any power generated onsite but not consumed is sent to the grid for a credit on their LDC bill.



3.2 Third-Party Ownership in Ontario

Current Treatment Under Ontario's Net Metering Regulatory Framework:

- Ownership and operation of generation facilities by third parties is not contemplated in the current net metering framework:
  - Current net metering framework is based on the premise that the person who owns or operates the generation facility will also be consuming that electricity on site.
  - As a result, net metering projects to date have involved a single homeowner or business being net metered for generation installed on-site and credited to a single electricity bill.
    - Net metered customers are able to obtain financing or lease generation equipment from third parties, similar to third-party participation in microFIT.

Current Treatment Under FIT and microFIT programs:

- The FIT program does not restrict third-party participation. Under the FIT program, program applicants/contract holders can be any individual or corporation that has access rights to the project site and meets the program eligibility requirements.
- Under the microFIT program, the property or building owner must be the applicant and contract holder (if contract is offered) and is responsible for complying with the program rules and contract. Applicants/contract holders can enter into contracts with third-parties (e.g., leasing arrangements) at their own discretion.
  - As a result, microFIT transactions between project proponents (owners) and third parties is considered a commercial transaction and not covered under consumer protection.

3.2 Third-Party Ownership in Ontario

Considerations:

- Third-party ownership model provides a property owner with an opportunity to participate in a renewable energy project without the full upfront capital cost of installing the system on their own.
- Potential net metering customers, including home owners, institutions, Indigenous communities and municipal governments could partner with third parties to develop projects to generate electricity at their property.
- Potential third parties could include renewable energy developers, electricity retailers, LDC affiliates or other businesses with expertise in distributed and renewable energy systems.
- SolarCity is the most prominent third-party participation model in the U.S., serving more than 300,000 residential, business and government customers with electricity packages that utilize solar PV systems to generate on-site electricity under a PPA business model.
- Consumer protection measures may be required, if third-party ownership models were to be made eligible under Ontario's Net Metering framework, to ensure contracts and business practices are in line with consumer protections in other commercial areas.

Key Policy Questions:

- *Should Ontario's net metering program contemplate third-party ownership models?*
  - Would third-party ownership arrangements align with the established program objectives (as identified on Slide 7)?
  - What potential opportunities and challenges exist for LDCs, businesses, and consumers?
  - What regulatory requirements or framework would or should apply to third-party ownership arrangements?

4. Program Updates Under Consideration: Virtual Net Metering

4.1 Single Entity Virtual Net Metering

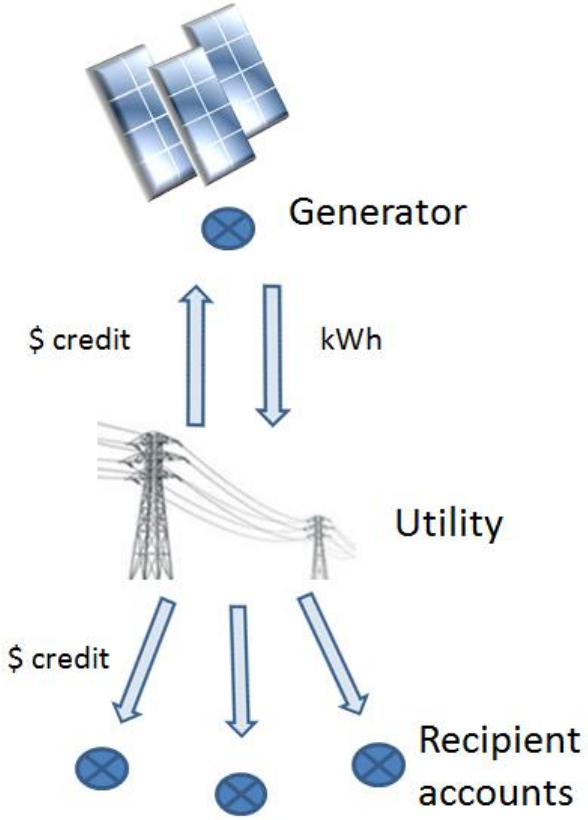
4.2 Multiple Entity Virtual Net Metering

4.3 Virtual Net Metering in Ontario

4.1 Single Entity Virtual Net Metering (SEVNM)

How does it work?

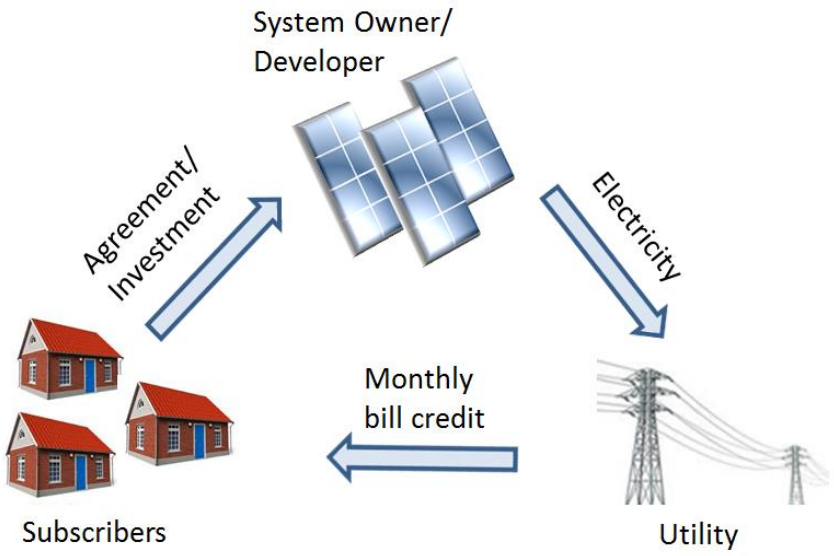
- Allows a *single entity* (i.e., person or corporation) with multiple meters to distribute credits among multiple accounts.
- Generation can be located behind the 'host' meter but sized to meet the load of multiple buildings or properties owned by the same entity. 'Recipient' accounts associated with the virtual net metered project receive credits from excess electricity exported to the grid by the host.
- 'Recipient' accounts/loads could be located on the same or adjacent properties as the host site or located elsewhere depending on restrictions imposed to location or use of the distribution system.



4.2 Multiple Entity Virtual Net Metering (MEVNM)

How does it work?

- Multiple Entity Virtual Net Metering (MEVNM), often referred to as community net metering, allows for multiple persons or corporations to participate in a shared generation project that can be sized to meet their combined electricity needs.
- Credits from the electricity generated are distributed to customers' accounts by the LDC and applied against customers' electricity consumption in proportion to their ownership share, historic electricity use or other agreed upon terms.
- The generation facility and credit recipients can be located on the same or different properties.



4.3 Virtual Net Metering in Ontario

Current Treatment Under Ontario's Net Metering Regulatory Framework

- Load aggregation under a SEVNM or under a shared ownership MEVNM arrangement are not contemplated by the current net metering framework:
  - Current net metering framework requires that the customer who owns or operates the generation facility will also consume that electricity on site (i.e. the generator must convey electricity to point of use without reliance on the distribution system), and
  - is based on the premise that a single entity owns or operates the generation facility and is also the same entity consuming the electricity.
  - As a result, net metering projects to date primarily involve a single homeowner or business generating electricity behind-the-meter and receiving credits against a single electricity bill.

4.3 Virtual Net Metering in Ontario

Considerations for SEVNM:

- Load aggregation for a customer with multiple loads (i.e. metered accounts) enables system right-sizing for multiple buildings, which can increase economies of scale and potentially improve project economics.
- Potential SEVNM participants could include municipalities, Indigenous communities, universities or other corporations or individuals with multiple electricity accounts.
- There are at least 18 U.S. states and two provinces that enable some form of virtual net metering:
    - Several U.S. states restrict aggregation of loads/accounts to within a specified distance (e.g. two miles) or to adjacent properties;
    - Some U.S. states restrict aggregation of loads/accounts to those of the same rate class or meter configurations or, in some cases, credit all accounts at the host's rate class; and
    - The majority of U.S. states impose a size limitation on SEVNM ranging from 25 kW for residential to 5 MW for large customer classes.
- Administrative costs associated with transferring credits between billing accounts for a large volume of SEVNM projects could represent an added cost for LDCs.
- SEVNM pilot projects could help identify best practices for new ownership models under net metering, inform regulatory changes and foster innovative approaches to distributed renewable energy in Ontario.

4.3 Virtual Net Metering in Ontario

Considerations for MEVNM:

- MEVNM can enable residents of condos and apartments, or members of co-ops, Indigenous communities, or other entities to develop shared generation projects, providing greater choice for more consumer groups and potentially increasing program uptake.
- However, MEVNM can also create administrative challenges for utilities related to verifying credit recipients, applying credit allocation formulas and transferring credits between accounts.
- In the U.S., 14 states and Washington, D.C. enable MEVNM:
  - All jurisdictions require that credited meters be located within the same LDC service territory as the generation project.
  - Some states allow credit transfers anywhere within the same LDC service territory, while others limit credit transfers to within the same feeder or to adjacent properties.
  - New York and Colorado require a minimum number of participants for projects.
  - California has policies in place to target participation of multi-unit residential buildings.
  - New York requires at least 20% of members to be low-income residents for projects not located in LDC-identified "Opportunity Zones".
- Several ownership models have emerged in the U.S. including:
  - Utility-owned projects (regulated or non-regulated subsidiary);
  - Developer-owned projects; and
  - Co-operative or non-profit-owned projects.

4.3 Virtual Net Metering in Ontario

Key Policy Questions:

- *Should Ontario's net metering program contemplate single entity virtual net metering?*
  - What kinds of design considerations for SEVNM should be addressed, such as:
    - Restricting use of the distribution system (e.g. adjacent properties, distance limitation, service territory, etc.);
    - Compensation structure for SEVNM customers (e.g. specific charges for SEVNM);
    - Treatment of different rate classes and billing cycles; and
    - Billing and credit allocation method (e.g., ordered list of credit recipients, allocation in proportion to consumption, etc.); and
    - Terms to address cancellation or changes to host or recipient accounts.
  - What other technical restrictions may exist that would limit potential SEVNM projects (e.g. connection constraints, metering issues, etc.)?
- *Should Ontario's net metering program contemplate* MEVNM *models?*
  - What kinds of MEVNM models should be considered and how do they align with program objectives?
  - What potential opportunities and challenges exist for LDCs, businesses, and consumers?
  - What regulatory requirements would be needed for MEVNM projects with respect to use of the distribution system, size and location of projects, or administrative requirements of LDCs?
  - What billing and technical aspects would need to be further explored to establish MEVNM?

5. Next Steps

5.1 Overview of Next Steps

5.1 Overview of Next Steps

During 2017:

- January 12th – Issue Questionnaire
- By end of January – Circulate Q&As following webinar
- January though February – Targeted stakeholder and Indigenous engagement meetings
- February 8th – Questionnaire and written response submissions deadline
- February through March – Analysis of feedback and development of policy options
- If there is a decision to proceed with any Part 2 net metering program updates, proposed legislative/regulatory amendments would be posted for further comment on the Environmental and Regulatory registries.

During 2018:

- Pending legislative and regulatory processes, potential changes to the net metering program related to third-party ownership arrangements and virtual net metering could have target implementation dates in 2018.

6. Questions and Discussion

- Please focus questions on topics covered in the presentation.
- Clarification questions will be prioritized.
- All questions and comments will be recorded and Q&As will be made available following the webinar.

Thank you for your participation!

- Help shape the direction of Ontario's Net Metering Program. We invite you to complete the **Questionnaire** and submit your response to the Ministry of Energy:

  By email to: Feedback.to.CEE@ontario.ca

  By mail to:
  Ministry of Energy
  Conservation and Renewable Energy Division
  77 Grenville Street, 5th Floor
  Toronto ON M7A 2C1
  Attention: Bryan Pelkey, Senior Policy Analyst

- Additional questions can be directed to:

  Renewable Energy Facilitation Office (REFO) at REFO@ontario.ca or by phone at 1-877-440-7336 (416-212-6582 within the GTA).

- Please submit your feedback no later than **February 8, 2017**.