



## Supporting Residential Roof-Top Solar and other renewable resources by clarifying eligibility of third-party leasing and financing net metering arrangements

Comments from the Canadian Renewable Energy Association

December 8, 2021

Thank you for the opportunity to provide comment on the proposal of the Ministry of Energy to make amendments to O. Reg. 541/05 (Net Metering), made under the *Ontario Energy Board Act, 1998*, to provide greater clarity on eligibility of a customer who is leasing or financing electricity generation equipment used for net metering.

The Canadian Renewable Energy Association (CanREA) is the voice for wind energy, solar energy and energy storage solutions that will power Canada's energy future. We work to create the conditions for a modern energy system through stakeholder advocacy and public engagement. Our diverse members are uniquely positioned to deliver clean, low-cost, reliable, flexible and scalable solutions for Canada's energy needs.

### Summary

CanREA shares the objectives of the Minister of Energy as set out in his November 22, 2021 letter to stakeholders (Re: Request for Feedback: Rooftop Solar and Net Metering), in which the Minister asserts his commitment to "...making green choices more accessible to consumers, specifically by enabling broader access to net metering." We applaud this objective, and strongly support this effort to clarify Ontario's net metering regulation.

The OEB Staff Bulletin of October 25, 2021, was encouraging to our industry in that senior OEB staff interpreted the existing net metering regulation as allowing for third-party ownership and financing arrangements. CanREA is aware that these types of commercial arrangements are already in place today between electricity consumers and solar companies in Ontario, and that amendments to the net metering regulation could strengthen investor confidence in these existing commercial arrangements and encourage further innovation and private sector investment.

CanREA does not recommend that specific criteria be set out in the regulation in terms of defining the conditions under which a customer would qualify as an eligible generator for purposes of leasing or financing generation equipment for net metering. Further clarity in the regulation to affirm the interpretation provided by OEB staff, without defining any specific criteria for third-party ownership and financing arrangements, would be a welcome step forward. Indeed, providing clarity to enable third-party financing would be the simplest and most cost-effective step toward broader access to net metering. Regulatory clarity to broaden third-party ownership and financing models will meet the Minister's stated objectives in his November 22, 2021. letter.

CanREA therefor recommends that the following clause be added to O. Reg. 541/05 (Net Metering):

***Eligible generator***

*7.(4) the generator may either own or operate the generation facility. In cases where the ownership and operation of a generation facility rests with different persons, the operator will be the person who, under the terms of its legal arrangement with the third-party owner, determines how and when the generation facility runs. The operator may outsource the maintenance and other technical aspects of the day-to-day operation of the facility to a third party and still be considered the operator provided they remain ultimately responsible for the operation thereof.*

CanREA strongly supports enhancing customer choice and enabling market-driven opportunities for private sector investment in Ontario's clean energy economy. Third-party financing arrangements for net metering level the playing field for households and businesses who may lack the upfront capital to purchase a renewable generator outright, while providing strengthened consumer protection. Small-scale renewable electricity generation can contribute to meeting Ontario's emerging energy system needs while at the same time providing consumers with greater choice, helping them to manage their energy costs and to meet personal or corporate sustainability objectives.

## Background

At present, Ontario is one of relatively few North American jurisdictions that lack a clear framework for third-party financing of net metering: The practice is very well established throughout the United States, and in Canadian provinces including British Columbia, Alberta and Nova Scotia.

It is also important to note that restrictions on third-party financing of behind-the-meter electricity generation in Ontario are unique to net metered renewable generation: If a consumer installs rooftop solar panels to reduce their electricity demand and does not enter into a net metering arrangement with their local distributor (i.e. a purely load-displacing solar PV system), the customer does not face any prescribed criteria for qualifying for electricity load displacement when they are leasing or financing their generation equipment. Similarly, if a customer installs a natural gas generator behind-the-meter to reduce their electricity demands, the customer has no prescribed criteria for eligibility when they are leasing or financing their generation equipment.

The most common and attractive type of financing arrangement between a solar net metering company and the electricity customer is the power purchase agreement (PPA). This is the most appropriate mechanism to ensure consumer protection and guarantee performance of the net metering generation facility. In this type of arrangement, a generation facility owner is incented to ensure optimal performance and the consumer is protected since they only pay for what is generated and that they consume. PPAs allow the renewable generator to accurately forecast production and offer the consumer a PPA rate that is typically lower than the expected cost of electricity that the customer would otherwise pay to their local distributor. Although consumer protection provisions can be added to equipment leases or other fixed-payment financing arrangements, a PPA by definition includes an inherent incentive for the solar company to install the highest-quality equipment, manage the production forecasting, monitor real time performance, perform system maintenance, and maximize the expected savings on behalf of the customer. For this reason, CanREA regards a PPA as the optimal structure for third-party financing of net metering.

The Ontario Energy Board staff bulletin of October 25, 2021, offered that financing arrangements may include solar PPAs, stating "*arrangements [ . . . ] where the agreement stipulates that the distribution customer/operator is to pay the third-party owner on the basis of electricity generated (e.g. per kilowatt-hour)*", further noting that "*such arrangements may trigger the requirement for the third-party owner to obtain a retailer licence, and to comply with the Energy Consumer Protection Act,*

*2010 if the customer is a low-volume consumer.”* Any amendments to the regulation must allow this arrangement to continue and ensure that the regulation allows a wide range of financing structures between third party owners of net metering generation facilities and electricity customers.

Greater clarity in O. Reg. 541/05 with respect to situations where the distribution customer operates but does not own the renewable energy generation facility would enable more equal access to net metering and would send a clear message to investors that Ontario is open for business and welcomes innovative financing solutions to assist electricity customers. CanREA does not see a need to explicitly define any criteria as to which types of third-party financing arrangements are or are not permissible within the scope of O. Reg. 541/05. Further, it is unclear that the *OEB Act, 1998, Section 88 Regulations, electricity licences*, subsections 1.1 and 2.1 permit regulations to be made that would prescribe such criteria.

## Typical models of third-party financing of net metering:

There are two typical models of third-party solar equipment financing:

- Solar Leases: Customer pays a third-party developer for the use of an on-site solar PV system over a specified period of time, rather than paying for the power generated – Pay per month for (e.g.) 15-year term
- Power Purchase Agreements (“PPAs”): Third-party developer sells the power generated by an on-site solar PV system to the customer for a fixed period of time (e.g. 15-year term) and at a fixed per-kWh rate (typically less than what is charged by the LDC). PPAs inherently afford greater consumer protection as consumers only pay for power produced.

At the end of the lease or PPA period, the customer owns the solar PV equipment outright, and continues to benefit from reduced demand for grid electricity for as long as the equipment remains operational – Solar panels can continue to generate for 40+ years and would remain a useful asset likely for decades after the conclusion of a standard lease or PPA term.

### Example:

250 kW DC of solar PV on 50,000 sq. ft. distribution centre for a large national grocery retailer in Burlington; Class B rate class.

- Annual load: 500,000 kWh (e.g. HVAC, refrigeration, lighting)
- Solar PV system output: 290,000 kWh
- Capital cost of solar PV system: \$450,000
- Annual operating/maintenance cost of solar PV system: \$2,500

Solar Lease	Solar PPA
<ul style="list-style-type: none"> <li>• Solar PV developer installs system on customer’s rooftop at zero upfront cost, and leases the system to the customer</li> <li>• Customer accrues electricity cost savings sufficient to cover the cost of a fixed monthly lease payment to the developer</li> <li>• At the end of the agreed term, the customer owns the solar PV system outright and continues to benefit from savings for as long as the system remains operational</li> </ul>	<ul style="list-style-type: none"> <li>• Solar PV developer installs system on customer’s rooftop at zero upfront cost.</li> <li>• Developer obtains a retailer license from the OEB</li> <li>• Customer and developer enter into a PPA whereby the customer agrees to pay a fixed amount per kWh (typically slightly less than the Class B retail rate) to the solar developer, for a guaranteed minimum supply of electricity per year from the rooftop solar PV system</li> <li>• At the end of the agreed term, the customer owns the solar PV system outright and continues to benefit from savings for as long as the system remains operational</li> </ul>

## Recommended approach and benefits of third-party financing of net metered generation

CanREA believes that any amendment to O. Reg. 541/05 (Net Metering) should not seek to specifically prescribe any specific third-party financing arrangement, but instead customers should be permitted to entertain a wide suite of service options among many industry players to benefit from competition amongst innovative solar businesses.

In terms of consumer protection, large-volume consumers are demonstrably capable of assessing proposals from the market and making decisions that are in their best interests in regard to solar net metering and a range of financing mechanisms. Low-volume consumers are similarly capable of assessing options and making decisions and are nonetheless currently protected under the Ontario Energy Board Act, 1998 regulatory regime and the Energy Consumer Protection Act, 2010.

### Benefits of third-party financing of net metered generation:

- Enhanced consumer protection: Maintenance and replacement costs would be included in the service agreement; The lessee or PPA purchaser is protected in the event that the solar PV equipment under-performs or malfunctions. Renewable energy developers offering PPAs would be covered under OEB Retailer Licensing obligations, thus further enhancing consumer protection
- Levelling the playing field for consumer choice: Access to third-party financing opportunities reduce the gap between haves and have-nots – More consumers are able to access net metering
- Avoided opportunity cost: All consumers, both businesses and households, are able to keep more cash on-hand while benefitting immediately from electricity bill savings
- Easier budgeting and cashflow management; preservation of lines of credit for Ontario businesses
- Tax planning for business consumers: Leasing/PPA arrangements may be preferable for businesses in that they can offer income tax planning advantages (leased equipment treated as an expense rather than depreciating purchased equipment as a capital cost)
- Ontario's developers of net metered renewable energy generation would benefit by accessing a wider pool of prospective customers, and reduced sales/transaction costs per installation

Every additional megawatt (MW) of net-metered rooftop solar PV installed in Ontario will generate approximately \$2 million in direct private-sector investment<sup>1</sup>; Dozens of full time-equivalent job-years of employment for Ontario workers (including in manufacturing, system design/engineering, installation, and maintenance)<sup>2</sup>; and reduced GHG emissions through avoided dispatching of costly and polluting natural gas peaking capacity during summer periods of high demand<sup>3</sup>. Moreover, these benefits would come at no cost to taxpayers, and with potentially significant long-term cost savings for ratepayers.

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<sup>1</sup> IEA PV Power Systems: “National Survey Report of PV Power Applications in Canada 2019” – Natural Resources Canada and the Canadian Renewable Energy Association – Available from: [https://iea-pvps.org/wp-content/uploads/2021/03/NSR\\_Canada\\_2019.pdf](https://iea-pvps.org/wp-content/uploads/2021/03/NSR_Canada_2019.pdf)

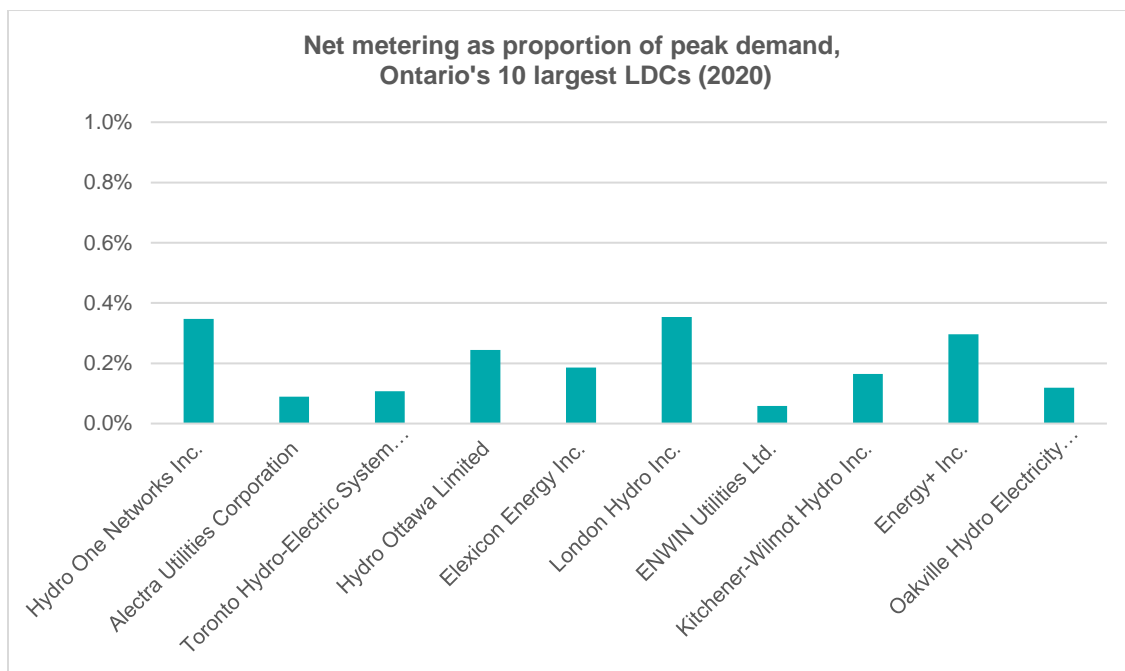
<sup>2</sup> “Nova Scotia Residential Solar Market Outlook and Labour Force Study – Final Report April 2019” – Dunsy Energy Consulting – Available from: [https://www.cansia.ca/uploads/7/2/5/1/72513707/cansia\\_nova\\_scotia\\_residential\\_solar\\_market\\_outlook\\_and\\_labor\\_force\\_study\\_-\\_final\\_report\\_2019-04-09\\_.pdf](https://www.cansia.ca/uploads/7/2/5/1/72513707/cansia_nova_scotia_residential_solar_market_outlook_and_labor_force_study_-_final_report_2019-04-09_.pdf)

<sup>3</sup> “Impact of Behind-the-Meter Solar in Ontario” – Power Advisory LLC, August 10 2021 – Available from: <https://renewablesassociation.ca/wp-content/uploads/2021/08/CanREA-study-Impact-of-BTM-Solar-in-Ontario-2021.pdf>

CanREA recently commissioned analysis of the whole-system impact of additional Behind-the-Meter solar in Ontario<sup>4</sup>. This research found that BTM solar can provide savings by lowering HOEP during peak demand hours in the summer, reducing the need to procure additional capacity through IESO's Capacity Auction (or other future procurements) and mitigating costs related to carbon prices and gas-fired generation. BTM solar can also mitigate the need for transmission infrastructure in response to load growth and the forthcoming retirement of the Pickering NGS.

### Prospects for net metering growth in Ontario

Regulatory certainty and broadening the types of third-party ownership arrangements will not open the floodgates to unmanageable levels of behind-the-meter renewable energy deployment in Ontario. As of 2020, there is less than 49 MW of net metered renewable generation across the province, including all solar PV, wind, hydro and biomass generation – This is equivalent to 0.2% of Ontario's 2020 peak demand.



Net-metered generation is already inherently limited in that:

- The economics are not adequately compelling at this time to see mass uptake (e.g. 13+ year payback period for commercial and industrial consumers, longer for residential)
- Generation would still need to be located behind the customer's meter, and thus inherently limited by roof space, on-site load, and local distribution grid conditions. Output could not exceed the customer's annual load, as net-metering credits must be applied to the customer's bill within a 12-month period
- Ontario's Distribution System Code restricts net metering capacity to one percent of the distributor's annual maximum peak load for the distributor's licensed service area<sup>5</sup>

<sup>4</sup> (Ibid)

<sup>5</sup> Ontario Distribution System Code Section 6.7 - Net Metered Generators:

6.7.2: A distributor shall, upon request, make net metering available to eligible generators in its licensed service area in accordance with the Net Metering Regulation, on a first come first served basis, unless the cumulative generation capacity from net metered generators in its licensed service area equals one percent of the distributor's annual maximum peak load for the distributor's licensed service area, averaged over three years, as determined by the Board from time to time.

These characteristics provide guardrails within which to enable modest, market-driven growth in subsidy-free renewable energy deployment, while enhancing consumer choice and helping to reduce whole-system costs for the benefit of all ratepayers as the need for new supply grows in the coming years.

For consumers who do wish to pursue net metering as a long-term investment in energy cost management and environmental sustainability, further clarity in the regulation to affirm the legal interpretation provided by OEB staff without defining any specific criteria for third-party ownership and financing arrangements would be a welcome step forward. Indeed, providing clarity to enable third-party financing would be the simplest and most cost-effective step toward broader access to net metering. Broadening, not restricting third-party ownership and financing models will meet the Minister's stated objectives in his November 22, 2021, letter. CanREA therefor recommends that the following clause be added to O. Reg. 541/05 (Net Metering):

***Eligible generator***

*7.(4) the generator may either own or operate the generation facility. In cases where the ownership and operation of a generation facility rests with different persons, the operator will be the person who, under the terms of its legal arrangement with the third-party owner, determines how and when the generation facility runs. The operator may outsource the maintenance and other technical aspects of the day-to-day operation of the facility to a third party and still be considered the operator provided they remain ultimately responsible for the operation thereof.*

Thank you for your consideration of our recommendations.

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