Feedback Form

Distributed Energy Resources (DER) Potential Study – September 30, 2022

Feedback Provided by:

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Date: October 28, 2022

The Independent Electricity System Operator (IESO) is seeking feedback and welcoming questions in relation to the Ontario DER Potential Study, which was published in-full on September 30, 2022.

The final study materials (the main report, the supplemental methodology/assumptions report, MS Excel Appendices, and updated results presentation), can be found on the DER Potential Study webpage.

Please provide any feedback and questions by October 28, 2022 to engagement@ieso.ca. Please use subject header: *DER Potential Study*.

To promote transparency, submitted feedback will be posted on the DER Potential Study webpage unless the sender requests otherwise.

The IESO will consider this feedback in the organization's future work, including but not limited to DER integration. The IESO will publish a document responding to feedback, and with support of the project consultants, respond to any technical questions relating to the study.

Thank you in advance for your contribution.

Takeaways, Recommendations, and Additional Analysis

Topic	Feedback
Does the report highlight the most relevant results and takeaways from the study? What other results or messages from this study are of high importance?	
Do the recommendations capture appropriate actions to acquire the DER potential revealed in the study? Based on the study results, are there other actions that should be considered?	One important mechanism for incentivizing solar PV that was not included in the report would be Community or Virtual Net Metering (CNM/VNM). In 2021, the Ontario Ministry of Energy took a significant step forward in authorizing CNM demonstration projects in the province (Changes to Ontario's Net Metering Regulation to Support Community-Based Energy Systems, 2020-21); CanREA would strongly encourage consideration of next steps to expand this demonstration project to a wider range of potential applications (including, for example, larger commercial, industrial and agricultural sites), toward making Ontario's net metering framework more accessible and inclusive going forward. CNM has many advantages over conventional net metering arrangements in that it enables solar net metering systems to be located where they can provide optimal value to the grid and make use of economies of scale, and has the potential to make renewable energy more accessible to a wide range of consumers, including renters, as well as home and business-owners who may lack access to suitable roof space

Topic	Feedback
Building on the work completed in this study, are there other areas of analysis that should be considered or undertaken that can provide meaningful insights for the IESO and others in the sector?	Examining obstacles to DER interconnection at the LDC level. CanREA is an active participant in the IESO TD WG and we strongly support the report recommendations regarding exploring challenges for T-D interoperability and investing in DER data collection and information sharing systems, but a closely related and perhaps even more fundamental consideration is around the extraordinary complexity, cost, delays and inconsistency in terms of the province's 57 different LDC interconnection processes and requirements. Since 2019, the OEB has undertaken important work on this through the DER Connections Review, however, greater strategic coordination with the IESO on this important file could be valuable in terms of providing clearer policy and market context for the technical discussions taking place between utilities and DER developers at the OEB.

General Comments/Feedback

Thank you for the opportunity to provide comment on the IESO DER Potential study. CanREA welcomes this timely and important study and we strongly support the view that DERs can and should make a greater contribution to meeting Ontario's resource adequacy needs. Technologies that lower peak grid demand and increase local generation reduce line losses, long-term transmission costs, and related infrastructure investments, enabling a more efficient and lower-cost electricity system for the benefit of all Ontario ratepayers.

In particular, we would emphasize our strong support for the following recommendations raised in the report:

- **Ensuring that solar net metering customers are able to access Time of Use rates, so that solar generation exported to the grid is fairly compensated at summer daytime peak rates**

  Net-metered solar PV is well-suited for reducing electricity demand during mid-day peak periods, without disruption of normal business operations. Access to a cost-reflective Time-of-Use rate option would thus greatly improve the economic incentive for these commercial and industrial consumers to adopt net-metered solar PV.

Rooftop solar PV production data provided by CanREA members indicates that approximately 50% of the total annual production from a solar PV installation in Ontario will occur during weekday summer peak and mid-peak hours, and a further 21% will occur during winter weekday peak and mid-peak hours.

Ontario's non-Regulated Price Plan (non-RPP) "Class B" consumers (mid-size commercial and light industrial consumers) currently do not have any access to a Time-of-Use rate option. Instead, these consumers are charged the Global Adjustment (GA) on a fixed, per-kWh basis, with no incentive to shift their electricity consumption during peak demand periods. Distributed solar PV therefor provices significant value to the energy system due to its alignment with summer daytime hours when air conditioning use is at its highest level.

In the case of Ontario's smaller (RPP) "Class B" consumers (households and small businesses), if these consumers install net-metered generation, almost all LDCs will force them to switch from the default Time-of-Use rate to a fixed per-kWh Tiered rate. This means that when these customers export surplus solar electricity to the grid during summer peak demand periods, they are credited for that generation at a rate more than 30% below the applicable Time-of-Use rate. This greatly diminishes the economic incentive for customers to invest in net-metered generation.

- **Providing more options for Behind-the-Meter battery storage (Residential, Commercial and Industrial) to contribute to meeting system peaks, through market participation, IESO procurements, and access to enhanced Time of Use rates**

  CanREA would strongly support expanding access to a critical peak rate for BTM energy storage beyond the current ICI program for Class A load customers, and we would urge the IESO to explore a potential critical peak rate program design through a demonstration project specifically targeted at smaller BTM storage customers.

  There is strong evidence from Ontario of how a greater correlation between price and total grid load can lower costs for both business and residential ratepayers, perhaps most notably demonstrated in the OEB's 2019 report *Examination of Alternative Price Designs for the Recovery of Global Adjustment Costs from Class B Consumers in Ontario*.

  Energy pricing schemes with a high correlation between price and total grid load have a proven track record in Ontario of incenting businesses to invest in demand reduction, peak shifting, and generation technologies.

- **Targeting new ground-mount solar PV in future IESO procurements**

  With the opening of the (E)LT1 RFP process approaching, CanREA and our members look forward to the IESO providing further details in the near future regarding plans to procure new electricity supply, and to ensure that existing resources remain available, in addition to this important capacity procurement. As the lowest-cost forms of generation, wind and solar PV in both new greenfield developments and repowered facilities will play an integral role in meeting the province's urgent energy supply needs while maintaining affordability for ratepayers and maintaining the province's clean electricity advantage.

CanREA strongly supports these recommendations, and we applaud the Ontario Ministry of Energy for the four new or enhanced Save on Energy programs set out in the October 4, 2022, ministerial

directive on the IESO 2021-2024 Conservation and Demand Management Framework as being very much in line with the findings of the DER Potential study, notably the Residential Demand Response program with an incentive for homes to reduce air conditioning and electric heating demand during peak periods, and for greenhouses in Southwestern Ontario to integrate behind-the-meter solar PV and battery storage.