

# Feedback Form

## Distributed Energy Resources (DER) Potential Study – September 22, 2021

### Feedback Provided by:

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Following the September 22<sup>nd</sup> public webinar on the DER Potential Study, the Independent Electricity System Operator (IESO) and the consultant, Dunsky supported by Power Advisory, are seeking feedback from participants on the pre-assessment screening criteria, the pre-assessment results, and on the proposed scenarios.

The referenced presentation and associated MS Excel worksheet (with the full list of DER measures and the pre-assessment results) can be found on the [DER Potential Study webpage](#).

**Please provide feedback by October 13, 2021 to [engagement@ieso.ca](mailto:engagement@ieso.ca).** Please use subject header: *DER Potential Study*. To promote transparency, this feedback will be posted on the [DER Potential Study webpage](#) unless otherwise requested by the sender.

The IESO and its consultant will work to consider and incorporate comments as appropriate and post responses on the webpage.

Thank you for your contribution.

## Pre-assessment screening criteria

| Topic  | Feedback |
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| <p>Are there any measure screening criteria missing that warrant inclusion?</p> <p><i>For reference: Measure screening criteria are described in slide 22 of the presentation deck</i></p> |          |

## Pre-assessment results

| Topic  | Feedback   |
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| <p>Do the short-listed technologies capture appropriate DERs given the study's 10-year time horizon? Are there measures that have been screened out that should be included and why? Alternatively, are there measures that should be screened out and why?</p> <p><i>For reference: The full list of measures and the results of the screening are identified in last tab of the Measure List and Pre-Assessment MS Excel worksheet</i></p> <p><i>Note: The study aims to include measures expected to have high value/uptake over study period</i></p> | <p>AEMA members are surprised that EV telematics did not pass the BTM qualitative pre-assessment. Remote monitoring and control of EVs via the on-board telematics system can be enabled cost-effectively by avoiding the need for supplemental hardware installation, and such functionality has been deployed as a part of several retail utility programs across North America today. Given the low adoption of L2 EV chargers today (only 1 in 9 EV drivers has a separate L2 EV charger at home), and the prevalence of control-capable vehicle OEM telematics platforms that do not require separate charging stations or hardware devices, EV telematics should be further explored as a technology measure in the potential study pre-assessment. Alternatively, the study authors should elaborate on their rationale that there is a "Limited market opportunity over the study period."</p> |

## Scenarios

**Topic**

**Feedback**

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Which factors should be varied between scenarios? Do you have suggestions on how such factors should be varied across three scenarios?

*For reference: Examples of factors that could be adjusted are listed on slide 37 of the presentation deck*

*Note: The study aims to prioritize factors expected to be most influential in driving DER value/uptake in Ontario*

As the AEMA has articulated in past submissions, there are a number of barriers that exist in the Ontario DR market. The section below provides a recap of the main impediments impacting the residential DR opportunity that should be considered in developing additional scenarios for the DER Potential Study:

- **M&V:** This is perhaps the largest barrier to residential participation in DR. Residential DR aggregators do not currently have a viable pathway to participate in the capacity market, as they are unable to cost-effectively request or obtain data from the distribution utilities that would meet IESO settlement requirements. AEMA is encouraged by the recent release of Green Button implementation requirements for utilities, but the 2-year implementation timeline will continue to be a significant barrier to market participation. In the short term, IESO should consider options for conducting M&V and settlement for the capacity, energy and reserve markets through the direct receipt of meter data from distribution utilities, or IESO should use its own meter data repository to perform M&V for settlement internally. This approach was successfully used in the York Region Pilot.

In the longer term, DER stakeholders, the OEB, Ministry, and IESO should work together to ensure that the Green Button standard is implemented uniformly across distribution utilities to streamline market participation for mass market DR aggregators. This includes avoiding the need for mass market participants to explicitly complete a "Share My Data" authorization if they've already consented to personal data/energy usage data sharing via

program-specific terms and conditions for a trusted DER aggregator.

- **1 MW aggregation size:** This could be a barrier for smaller aggregators, and does not encourage competition. It also limits aggregation potential in smaller zones. We recommend that the aggregation size be lowered to 100 kW. Moving in this direction will ensure alignment with FERC's minimum aggregation size requirements for DER participation. In Ontario, the York Region Pilot has already demonstrated that lowering the thresholds improved outcomes.
- **Streamlined customer enrollment process:** As a customer, enrolling in a residential aggregation for market participation must be simple and not require many steps. Requiring customers to provide an account number during sign-up, or log into their utility portal to complete Green Button authorization, create barriers that can significantly reduce enrollment rates. For instance, residential market-integrated DR programs in California that require customer action via Green Button see 10-30% lower conversion rates of eligible customers in comparison to the residential load management programs in ERCOT, which do not require a separate customer data authorization (more details below).

As mentioned above, IESO should consider developing a centralized database of distribution utility meter/account data. A centralized data platform would enable aggregators to validate customer eligibility and search/retrieve customer information and meter usage data using a secure, unique identifier. ConEdison makes such a portal available to aggregators participating in its retail performance programs, and several other states have pursued or are implementing similar initiatives (e.g., Smart

Meter Texas, the IEDR proceedings in New York, and NJ BPU AMI proceeding). The ESI ID system implemented as a part of ERCOT's Smart Meter Texas database provides a great model for centralized and secure customer/meter data retrieval. Customers submit their home address to enroll in a DR program (and don't have to submit their utility account number), and their address can be linked to a unique identifier (the "ESI ID") for validating program eligibility. Removing barriers to enrollment has enabled residential DR programs to scale significantly, and similar models should be considered as a part of Green Button implementation in Ontario.

In addition, we recommend that demand response **baselines** be established using statistical residential regression methodologies, which are the most accurate approach to conducting M&V for residential aggregations. This is the default baseline used for the weather sensitive DR program in other wholesale markets, such as ERCOT. Control group baselines are also a viable approach, so as long as the size of control groups does not substantially subtract from the overall size of the aggregation. Alternatively, allowing a control group to count toward the aggregator's market commitment and settling/paying based on the performance of the test group can mitigate the impact of control groups on reduced performance of an aggregation.

We also recommend that **testing** events should occur on high demand days to simulate a real event as best as possible.

Finally, we recommend variable commitments by month. This will allow aggregators to have a different kW commitment for each month of the season,

| Topic | Feedback  |
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|       | <p>and allow for changes to contributor lists to be modified from month to month and account for seasonality.</p> <p>The market participation potential of mass market DERs is extremely dependent on each of the factors outlined above. Therefore, AEMA recommends that the above barriers be factored into the scenarios being explored.</p> <p>Scenarios should also consider sensitivity analysis relating to gas and carbon pricing.</p> <p>AEMA members offer their expertise and experience in other markets to develop an "Optimal market design" scenario that would show the achievable DR potential enabled by an "ideal" capacity auction/market design.</p> |

## General Comments/Feedback

It is also important for the DER Potential Study to consider an average growth rate of installed thermostats in Ontario by aggregating data from several leading provider. AEMA members see around 15-20% compound annual growth rate (CAGR) of the installed connected thermostat base in the US (and even more where energy efficiency and/or demand response incentives are high). In Ontario, given past provincial and existing federal programs along with a continued penetration of smart devices, considerable opportunity exists to leverage smart thermostats and optimize a variety of assets. We recommend that the Power Advisory and Dunsky meet directly with our member DERMS providers to explore options and gain insights into market development.

AEMA is a North American trade association whose members include distributed energy resources ("DER"), demand response ("DR"), and advanced energy management service and technology providers, as well as some of Ontario's largest consumer resources, who support advanced energy management solutions due to the electricity cost savings those solutions provide to their businesses. These comments represent the views of AEMA as an organization, not any individual company.