

# Stakeholder Feedback and IESO Response

## Distributed Energy Resources (DER) Market Vision and Design Project – September 20, 2022

Following the September 20, 2022 public webinar on the DER Market Vision and Design Project (MVDP), the Independent Electricity System Operator (IESO) received feedback from participants on the proposed recommendations for the Foundational Models.

The IESO received feedback from:

- [Advanced Energy Management Alliance \(AEMA\)](#)
- [Electricity Distributors Association \(EDA\)](#)
- [Toronto Hydro \(THESL\)](#)

The presentation materials and stakeholder feedback submissions have been posted on the [DER Market Vision and Design Project webpage](#). Please reference the material for specific feedback as the below information provides excerpts and/or a summary only.

### Notes on Feedback Summary

The IESO appreciates the feedback received from stakeholders. The IESO has provided a summary below, which outlines specific feedback or questions for which an IESO response was required at this time.

## Recommendations for Foundational Models

All feedback submissions included comments on the appropriateness of the foundational model recommendations and identification of potential risks to DER(A) participation in wholesale markets. These points are summarized in the table below.

Feedback	IESO Response
<p><b>AEMA:</b></p> <ul style="list-style-type: none"> <li>Indicated support for the development of the DER(A) and the accompanying foundational and enhanced models, however, expressed concern over the pace of the development of the rules and recommended the IESO accelerate development of DER procurement process alongside capacity participation and send market signals with MW targets.</li> <li>Further recommendations include: provide stakeholders with a better understanding of which specific tool changes are in scope, relax: telemetry, metering and visibility enhancements, consider “moderate” tool changes, and reduce the 1 MW nameplate capacity threshold to 100 kw as other markets have already implemented.</li> </ul> <p><b>EDA:</b></p> <ul style="list-style-type: none"> <li>Suggested the foundational model reconsider any factors which will risk inhibiting DER(A) participation in the wholesale markets, and that the foundational model needs to clearly consider the role distributors are naturally positioned to successfully deploy DER(A)s in communities they serve.</li> <li>Recommended the following phase one foundational items be reviewed further beyond the IESO recommendations presented on September 20: Distributor Representation, Participation and</li> </ul>	<p><b>AEMA:</b> The IESO thanks the AEMA for their support. With respect to the pace and development, the IESO is on target for a 2026 delivery, and has designed the foundational model to maximize the opportunities for DER(A)s to participate in future procurements as they materialize.</p> <p>In Oct. 2022, the IESO was directed by the Minister of Energy to procure additional peak demand savings of 285 MW and annual energy savings of 1.1 TWh of additional Conservation &amp; Demand Management which – consistent with the recommendations of the DER Achievable Potential Study will provide a pathway to unlock value from certain DERs while the IESO puts new market participation models in place.</p> <p>As noted, the DER MVP will not make changes that impact major calculation engines including Market Renewal’s new day-ahead engine, the real-time dispatch scheduling and optimization tool (DSO) and the new settlements engines delivered as a part of the Replacement Settlement Systems (RSS) project. Those engines are also fed by a number of interconnected systems and databases, where, if changes are made in one, there will be impacts to the engines (and vice versa). While the IESO appreciates and understands the AEMA’s desire to better understand the IESO’s market and reliability tools, the IESO notes that not only would it be impractical to list all such tools, but it would require substantial context around what functionality each tool performs, what systems they feed, what change to the coding/calculation is needed, and what the resulting impacts would</p>

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Aggregation Locational Requirements, Minimum / Maximum Thresholds, Level of Telemetry, Level of Metering Installations.

**THESL:**

- Noted that at present, the proposal excludes local distribution companies (“LDCs”) from participating as a foundational model DER or DER(A), and suggested this be reviewed with the OEB prior to the Market Design phase.
- Encouraged the IESO to consider how non-performance charges apply to DERs serving both bulk-system and distribution-system functions.

be. In addition, since development and implementation is still underway with MRP, this information would be subject to change. All required tool changes to implement the foundational model will be identified during the Market Design Project phase of implementation.

With respect to a relaxation of existing requirements, the IESO has, in its foundational model recommendations, allowed for the aggregation of telemetry (subject to reliability assessment) and has relied on precedence from existing IESO market rules to reduce precision/hardware metering requirements for a certain size of contributor to an aggregation. The IESO understands that other system operators, who, for the most part, also require individual metering like the IESO, have not elected to relax these precision/hardware requirements. The IESO remains open to learning about and considering specific approaches taken by other jurisdictions should stakeholders wish to flag them.

The IESO has identified lowering the minimum size threshold as a potential option to be further explored during the Market Design stage for feasibility and will also recommend lowering this threshold for the enhanced model.

**EDA:** The IESO appreciates the EDA’s feedback and intends to provide substantially more detail with respect to how the recommendations will be implemented, market participant expectations etc. during the Market Design Phase.

**THESL:** The IESO appreciates this feedback and will continue to work closely with the OEB on cross-cutting items such as this one.

The Market Design phase will speak to performance charges as it pertains to DERs serving both the wholesale and the distribution systems.

Feedback submissions from AEMA and EDA included recommendations on key options that should be prioritized for the enhanced models. These points are summarized in the table below.

Feedback	IESO Response
<p><b>AEMA</b></p> <ul style="list-style-type: none"> <li>• Expressed a preference that the enhanced models be considered as soon as possible.</li> <li>• Recommended that of the foundational models currently proposed, the ability to aggregate behind the meter assets into an aggregated Dispatchable Load should be one of the highest priority items.</li> <li>• Suggested that under the current proposal, the viability of these Dispatchable Load aggregations will be very limited due to: Telemetry or metering requirements on the contributors to the aggregation, as well as aggregated resource types other than Dispatchable Load resources not being eligible.</li> <li>• Recommended the IESO revisit its decisions regarding Dispatchable Load Aggregations with a lens of keeping the requirements of the Aggregation the same as current market rules but allowing more flexibility.</li> </ul>	<p><b>All:</b> The IESO appreciates this feedback and notes that many of these items, will be considered during the MDP phase and during the finalization of both the foundational and enhanced model as appropriate.</p> <p><b>AEMA:</b> The IESO understands the interest in moving towards the enhanced models and will outline criteria to trigger the initiation of the enhancements in the January 2023 DER MVP engagement session.</p> <p>The IESO’s goal for the enhanced model is to unlock as many types of DER technologies and aggregation compositions as possible which includes providing more flexibility for aggregation compositions containing behind-the-meter resources. As noted above, the foundational model does provide certain flexibility for telemetry and metering and the IESO invites the AEMA to provide specific solutions or methodologies adopted by other jurisdictions that would unlock additional flexibility for consideration in the enhanced model.</p>
<p><b>EDA</b></p> <ul style="list-style-type: none"> <li>• Recommended the following key options be prioritized in the enhanced models: Distributor Level Resource Telemetry Points, Distributor Representation, Participation and Aggregation.</li> <li>• Also recommended: <ul style="list-style-type: none"> <li>○ the foundational model be detailed and specific, and that timelines should be specified for the IESO’s enhanced models.</li> </ul> </li> </ul>	<p><b>EDA:</b> The success of both the foundational and enhanced models will require distributor coordination and involvement specifically in the areas of telemetry, outage management, and day-ahead and real-time operations. Distributor participation in wholesale markets as the IESO Registered Market Participant in energy and ancillary services was not explored as a part of the enhanced model as the ability to take on this role is subject to the OEB’s interpretation of legislation. The IESO also notes that there is a diversity of opinion on this particular subject, as noted in the November 30<sup>th</sup> feedback received via the <a href="#">Transmission-Distribution Work Group (TDWG)</a>. The IESO intends to continue this conversation with the OEB and present all stakeholder viewpoints on this topic.</p>

<ul style="list-style-type: none"> <li>○ Distributors should be given prioritized consideration in the enhanced models.</li> <li>○ Clarity and understanding on where decision-making authority lies in the foundational model; Foundational considerations should not be delayed due to 'interpretation' and lack of coordination between organizations.</li> </ul>	
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## General Comments/Feedback

Additional general comments were provided by EDA and THESL, and these points are included in the table below.

<b>Feedback</b>	<b>IESO Response</b>
<p>EDA</p> <ul style="list-style-type: none"> <li>• The IESO should leverage the expertise of distributors in the DER Market to the maximum of its abilities. More generally, enabling DERs connected to the distribution system to participate in IESO markets will require the necessary involvement of transmission and distribution systems. The IESO should also consider the engagement of the utilities more strongly beyond the monthly engagement sessions to ensure that the role of the distributors and potential impacts of the Market Vision and Design Plan on the distribution and transmission systems are understood. Phased, Regional, and Test approaches are encouraged by distributors to fully assess the options and impacts of each decision.</li> </ul> <p>THESL:</p>	<p><b>All:</b> The IESO agrees that leveraging the expertise of distributors will be a necessary step in the development of both the DER foundational and enhanced models. The IESO looks forward to continued engagement with the distributor community and will require additional and more extensive feedback during the formalization of the transmission-distribution coordination protocols when updates to the market rules, manuals and processes are initiated via the Market Design Phase.</p> <p>The IESO also agrees that testing the protocols from a practical perspective will extract benefits to all parties involved and has endeavored to, and will continue to refine, DER aggregations testing via the 2021 Joint-Targeted Call (JTC) for DER Integration. More information on the JTC can be found <a href="#">here</a>.</p>

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- Toronto Hydro appreciates the IESO's commitment to sector evolution and the efforts of IESO staff to enable new pathways for DER participation in wholesale markets. As a leading enabler of non-wires alternative solutions at the distribution level, Toronto Hydro notes LDCs are uniquely positioned to enable DER integration, given their visibility into distribution system needs and hosting capacity, as well as customer relationships. LDCs can be an important partner to the IESO in developing participation models that encourage market participation while driving rate-payer value.
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