

Feedback Form

Distributed Energy Resources (DER) Market Vision and Design Project – June 22, 2022

Feedback Provided by:

Name:

Title:

Organization: Electricity Distributors Association

Email:

Date: July 20 2022

Following the June 22nd public webinar on the DER Market Vision and Design Project, the Independent Electricity System Operator (IESO) is seeking feedback from participants on the options to the Phase I Questions for the foundational DER model(s), and any key considerations for the IESO to take into account as options are assessed for the Phase 1 Questions.

The referenced presentation can be found on the [DER Market Vision and Design Project webpage](#).

Please provide feedback by July 14, 2022 to engagement@ieso.ca. Please use subject header: *DER Market Vision and Design Project*. To promote transparency, this feedback will be posted on the [DER Market Vision and Design Project webpage](#) unless otherwise requested by the sender.

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

Thank you for your contribution.

Phase I Questions

Topic	Feedback
<p>Has the IESO identified the appropriate options to the Phase I Questions for the foundational DER model(s) for this project? If not, please provide details on additional options for consideration and associated rationale for the option.</p>	<p>The IESO’s Phase I Questions for the DER Market Vision and Design Project (MVDP) provide a very detailed approach to the foundational DER models. The addition of sub-question/sub-features and each of the varying options offers an in-depth approach to reviewing the many aspects of each of these four key focus Phase I questions.</p> <p>We offer the following as additional consideration in each of these four areas:</p> <p>(1) <u>Participation and Aggregation:</u> As DER participation and aggregation is reviewed and enhanced, the IESO should consider the distributors’ naturally positioned role to participate in all aspects of DER implementation as well as the existing infrastructure, which is a natural fit for aggregation at a distribution system level for dispatchability, locational requirements, and composition. Below are the LDCs’ considerations for the options and associated rationale for each question.</p> <p>Question (1) Dispatchability: If distributors can enable each resource DER(A) they are positioned well and closely to the customers to be able to aggregate either dispatchable or non-dispatchable resources. The dispatchable option provides flexibility to provide the needed capacity, while the future grid will also be benefited from non-dispatchable resources as long as LDCs are able to monitor, control, and settle DERs as per contracts between the Distribution System Operator (DSO) and DER(A). Distributors possess the local knowledge of each system to provide the expertise for each option based on customer mix, and availability.</p>

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	<p>Locational Requirements: To realize the full benefit of the market a combination of single and multi-nodular aggregation may yield benefits to the grid by providing flexibility as required throughout the system. LDCs acknowledge the single node option is simplistic and offers a manageable option while the multi-node requirement is explored further.</p> <p>Aggregation Composition: We recommend a stepped approach to the aggregation composition for the foundational model and recommend aggregating homogenous resources based on distribution location as the contributor resources will be the same type and more simplistic profiles to model resources' impact on the bulk system. As profiles are developed within certain areas and processes are explored more thoroughly, we encourage expansive heterogeneous combinations to be implemented throughout the system. Heterogeneous combinations offer a mixture of dependability, with a mix of resources to rely on at the most optimal cost.</p> <p>Question (2) Owners, Aggregators, and Distributors: Distributors are optimally poised from an industry structure, regulatory, customer interface and oversight perspective in their distribution areas, and the total DSO model reduces the complexity of managing DERs. Distributors hold existing relationships with their customers in their regions and provide a natural fit for the point of contact and contracting to enable DER stacking value in both local and wholesale markets without risk of double counting. To do this successfully distributors will require visibility on the DER and their operations. Should there be successful movement for legislative changes to allow LDC</p>

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	<p>participation in the markets, this would allow the natural progression of seamless operations in metering data and settlement verification.</p> <p>Question (3): Minimum Size / Maximum Size Thresholds: While distributors see the administrative and planning benefits of limiting the thresholds for participation in DERs and DER(A)s, we encourage the IESO take a stepped approach to its threshold determinations. The stepped approach should be rolled out by maintaining current minimum thresholds to ensure the ease of integration, and communication needs to be developed for customers of this plan and opportunity. No maximum size limitation will offer diversity of inclusion and better confidence in resources available. Distributors will have the resource knowledge to plan within their systems appropriately.</p> <p>(2) Eligible Services: As the eligible services are reviewed the IESO should take into its consideration a systematic and methodical approach to its project planning. Although these options are binary, they are interconnected, and one decision can impact the probability of choosing another and thus cannot be oversimplified. Distributors are naturally positioned to enhance the existing distribution systems and customer relationships for the DER systems being considered. Below are the distributors considerations for the options and associated rationale for each question related to eligible services.</p> <p>Question (4) Distributors currently do not see any strong limitations to any of the following Options: Capacity, Energy, Operating Reserve, Regulation Service, and</p>

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	<p>Other Ancillary Services. DER(A) can provide for all products and services listed, albeit some safeguards may need to be built into licencing to ensure resource availability to support the grid.</p> <p>Question (5) Distributors currently do not see any strong limitations to the timeframes that DER(A)s will be eligible to participate in Day-ahead Market, Pre-dispatch Unit Commitment Eligibility or Real Time Market. The ability to provide all services enables customer choice and increases flexibility available for meeting local or wholesale needs.</p> <p>Question (6) The appropriate visibility requirements for DER(A) are:</p> <p>Distributor level Resource Telemetry Points and Status: The need for individual resource telemetry points and statuses. Remote Monitoring and remote shutdown capability is required for the following situations: (1) Those connected in parallel equal to or greater than 100kW and closed transition (Load Displacement) and (2) Open transition and close transition projects that are equal or greater than 1MW. Distributors can provide an aggregated telemetry and status from the DER Owner/ Aggregator to the IESO. Individual resource telemetry is then not necessary.</p> <p>Maximum and Minimum: All DER projects regardless of size will need to consider acceptable time latency; less latency is always the preferred approach.</p> <p>Treatment of Variable Generation (VG): Requirements should remain consistent as the requirements currently in place. Technology exists to keep telemetry latency under one minute.</p>

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	<p>(3) IESO Distributor Coordination (Question 7) outlines the coordination of protocols. The IESO has noted that a few items are being examined as a part of the Transmission-Distribution Working Group (TDWG), and as major contributors in both projects it needs to be emphasized that the impact of this cross-sectional work on protocols and mechanisms between the TDWG and DER MVDP decisions will greatly impact the outcome of one another. The IESO should focus on leveraging LDCs' expertise compiled at the TDWG to discuss and provide advice on all items related to interoperability and coordination. It is imperative to the successful roll out of the DER MVDP that the coordination protocols be established by cross-section experts in the local markets and distribution service areas and be tested. Communication of overrides must be jointly reviewed and tested to ensure process effectiveness.</p> <p>(4) Metering and Settlement At each point of the cross-section distributors are naturally positioned to manage the metering and settlement of the DERs / DER(A). The IESO should focus on leveraging LDCs' expertise, particularly for this aspect of the MVDP. Below are the distributors' considerations for the options and associated rationale for each question related to Metering and Settlement.</p> <p>Question (8) The Revenue Metering arrangements which are appropriate for DER(A) by distributors are aggregate metering constructs for the wholesale market. Distributors already have experience and expertise to provide aggregate telemetry and status from DER owners and aggregators to the IESO.</p>

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	<p>Individual metering directly to the IESO for settlement is not necessary and the existing rules are adequate to give valuation of services and leverage measurement and verification of DER(A) settlements. One area that could be considered for review is the size thresholds, flexibility and changes may be needed to enable the use of distributor owned resources and enable market participation at a lower cost.</p> <p>Question (9) Settlement Arrangements: Currently there are no protocols to settle DER(A) with distributors and there would be a need for additional settlement considerations in the future planning of this project. DER(A) should be given compensation for satisfying the resource needs upstream through a cost sharing mechanism. This type of sharing ensures equity in stakeholder benefits from DERs and serves to compensate in the most valuable way. Similar benefits at the distribution system level are currently observed at the transmission level in various forms.</p> <p>Distributors play a major role in DER / DER(A) integration: Increasing DER participation in wholesale markets will also increase the complexities of managing the distribution system and require distributors to effectively integrate new DERs and manage increased two-way power flows across the T-D interface. Implementing options to enhance DER integration would likely necessitate expansion of the LDCs' role and the IESO would benefit by considering the many ways the existing distribution system can be maximized in its vision plan fairly and equitably.</p>
Based on the criteria outlined in this presentation, are there any key considerations you would like the IESO to	The strategic, reliability, market, and market participation criteria used to evaluate foundational

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<p>take into account as we assess options for the Phase I Questions?</p>	<p>model options and risks, should also have a cross section benefit which considers “distributor participation”. The distributors’ role in DER integration is a very important one and LDCs are uniquely positioned to be able to coordinate the outcomes of the options for the Phase I questions. Adding distributor participation to the benefit criteria will assist in minimizing the risk items identified. Maximizing the expertise that distributors hold in these markets can minimize any complexity of implementation, associated costs, and negative impacts to operability to ensure that we avoid any potential for unintended market consequences and loss of economic efficiency. Including the LDC role as a criterion to evaluate foundational model options will minimize tool complexity and associated costs, and unintended cost impacts not just at the system level but also at the distribution level.</p>

General Comments/Feedback

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 on another for the DER MVDP.