

Feedback Form

Distributed Energy Resources (DER) Roadmap – June 22, 2021

Feedback Provided by:

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Following the June 22, 2021 DER Roadmap engagement meeting, the IESO is seeking feedback from participants on the DER Roadmap, stakeholder views on the DERs that are most likely to emerge in Ontario, the OEB/IESO joint engagement objectives and proposed process, and finally, on the upcoming OEB/IESO joint targeted call on Enabling Resource. The IESO will work to consider feedback and incorporate comments as appropriate and post responses on the engagement webpage.

The referenced presentation can be found under the June 22, 2021 entry on the [DER Roadmap webpage](#).

Please provide feedback by July 14 2021 to engagement@ieso.ca. Please use subject: *Feedback: DER Roadmap*. To promote transparency, this feedback, if provided in an AODA-compliant format (e.g. using this form) will be posted on the [DER Roadmap webpage](#) unless otherwise requested by the sender.

Thank you for your time.

DER Roadmap

Topic	Feedback
<p>Has the IESO identified the right focus areas to deliver on its goal for DER integration?</p>	<p>Increased focus on including DERs as part of the Annual Acquisition Report and Capacity auction participation is required. Renewed focus on the total value that DERs bring to the grid is required to ensure proper incentives are provided to support the growth DERs. The IESO has reviewed New York's VDER program components that identify the value components of DERs. Similarly in Ontario, the value of DERs is hidden and requires market mechanisms or programs to surface that value. (New York's VDER examines Energy value, Capacity value, Environmental value, Demand Reduction Value, Locational System Relief Value).</p>
<p>Will the near-term initiatives enable the IESO to make timely progress on its goal and focus areas?</p>	<p>The stated near-term activities should not slow down the current DER momentum. As the IESO indicated there are 5000MWs of DERs in the province. This clearly shows sufficient DER potential. The interest in the York Region NWA also shows an appetite for such programs.</p>
<p>Are stakeholders supportive of the approach detailed in the draft DER Roadmap Engagement Plan?</p>	<p>Peak Power is generally supportive of the approach. Peak Power will continue to support the IESO with pilot projects as necessary to prove DER's value and effectiveness. Peak Power wants to ensure that the IESO makes necessary accommodations to support the growth and penetration of DERs.</p>

DER Roadmap – Stakeholder Views

The IESO is seeking stakeholders who wish to present their views on the DERs that are most likely to emerge in Ontario and how they should be incorporated into wholesale markets. IESO will seek to identify a number of stakeholders to present their views at the September engagement days and will work with stakeholders to coordinate content. Presentations and subsequent stakeholder discussions will provide insight for the DER Market Vision Project.

Interested stakeholders are asked to briefly identify their views below. If stakeholders prefer not to have these initial views on DERs published as part of this broader feedback submission, please email your comments separately to engagement@ieso.ca.

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Views on the DERs that are most likely to emerge in Ontario and how they should be incorporated into wholesale markets	<p>Buildings are one of the greatest sources of carbon emissions in the province. Peak Power is willing to work with the IESO to determine how buildings can contribute to the reduction of emissions by more actively managing power consumption during peak times. Peak Power has significant experience with buildings and believes that given the correct market signals they can operate in a manner that can reduce energy consumption and emissions while also contributing to the power grid through DR and other ancillary services.</p> <p>With aggressive policies aimed at reducing internal combustion engines, Electrical Vehicles are seen as the natural replacement. EVs provide both challenges and opportunities for grid management. Peak Power wants to be a part of the solution by making bidirectional charging a viable option to benefit the EV owner and grid. As proven in the Peak Drive pilot program bidirectional functionality allowed for the discharging of EV batteries at times of high demand. Peak Power believes that EVs can be the most beneficial DERs to emerge as EV penetration continues, but only if the IESO creates a wholesale market construct to foster market participation for such DERs.</p>

OEB/IESO Joint Engagement on DER Integration

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Do the proposed OEB/IESO Joint Engagement objectives meet stakeholder needs?	The objectives do not go far enough to ensure a proper framework for DERs to expand and thrive in Ontario.

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	<p>With the looming Capacity shortfall pointed out in the APO the objectives should include:</p> <ul style="list-style-type: none"> - Ensure the full potential of DERs in the province is exploited expeditiously. - Ensure that barriers to deployment of DERs are eliminated at all levels for example at the IESO, LDCs, Utilities, and aggregators. - Ensure that proper incentives are provided to DERs commensurate to the value that they provide.
<p>Will the proposed process for OEB/IESO Joint Engagement enable us to deliver on the proposed objectives?</p>	<p>The IESO and the OEB have the authority to quickly enhance the grid capabilities by introducing mechanisms to foster DER adoption. The stated objectives do not take advantage of the IESO's and OEB's authority to limit consumers costs in the long run. The process should focus on 1) determining and eliminating barriers to DERs deployment and 2) valuing the broader impact of DERs on the grid and making commensurate incentives available.</p>
<p>What are the cross-cutting issues relevant to the OEB/IESO Joint Engagement that there should be focus on/awareness of and why do they matter?</p>	<ol style="list-style-type: none"> 1) Determining and eliminating barriers to DERs deployment: There are numerous barriers to entry for DERs. For example, at the IESO their participation in certain markets is not catered for and the attributes that DERs provide are not acquired by the IESO through competitive market mechanisms (for example flexibility). 2) Valuing the broader impact of DERs on the grid and making commensurate incentives available: DERs are located closer to load pockets and can offset investments in transmission and distribution. DERs by being able to participate in the wholesale market reduce LMP

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	<p>when dispatched leading the lowering the marginal cost of energy and potentially displacing carbon-emitting sources of energy. This value can be determined and used as an incentive to encourage the deployment of more DERs.</p> <p>3) The Joint Engagement is well-positioned to investigate utility remuneration models that ensure that utilities have an incentive to encourage DER growth. Utilities will benefit from reduced system costs as an increased number of DERs are deployed.</p>

OEB Innovation Sandbox and IESO Grid Innovation Fund Joint Targeted Call on Enabling Resources

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<p>Given the problem statement, recommendations, and opportunity presented today, what barriers to DER integration are best suited to be addressed through the joint call?</p>	<p>Revenue: Currently the hurdle for the deployment of large-scale DERs is the lack of revenue streams. There are programs in the US (for example Clean Peak) that will guarantee revenues for the DER for a specific period. This allows hosts and investors the ability to model real fixed revenue streams in their financing models and ultimately leads to easier financing for the DERs. The value of the DERs to the distribution and transmission grids and environment is factored into the fixed payment made to the DERs.</p> <p>Aggregation: To achieve economies of scale a mechanism needs to be created to allow smaller DERs to aggregate and be dispatched as a single resource. The challenge lies in pricing the individual DERs of the aggregate and ensuring the electrical distribution system constraints are being adhered to for each DER.</p>

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Which kinds of projects designed to address these barriers would be expected to benefit from regulatory support available through the OEB Innovation Sandbox?	<ol style="list-style-type: none"> <li data-bbox="987 170 1516 636">1. Determining the value of DER at specific areas of need. Creating funding programs for DERs that meet the specific need. The need could be to 1) off-set or defer transmission costs, 2) off-set or distribution costs, 3) improve local grid reliability and resiliency, 4) environmental benefit, and 5) Energy market cost savings from not having to dispatch more expensive generation. <li data-bbox="987 646 1490 835">2. Fund the creation of DER aggregations via pilot projects. The projects will allow for aggregating multiple DERs and assist in determining barriers and benefits.

General Comments/Feedback

Peak Power Inc is an Ontario-based software company that develops and operates multiple DERs with buildings, battery systems, and Vehicle to Grid functionality. Peak creates solutions to modern grid challenges utilizing cutting-edge innovation.