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# OEB/IESO Joint Engagement on DER Integration Draft Cross-cutting Issues

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# Webinar Participation (including audio)

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- This webinar is conducted according to the [IESO Engagement Principles](#)

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# Agenda

1. Purpose
2. Recap of OEB/IESO Joint Engagement
3. Stakeholder Feedback Themes
4. Draft Cross-cutting Issues
5. Stakeholder Feedback
6. Next Steps

# Purpose

The purpose of today's session is to:

- Present an update on the OEB's recent Distributed Energy Resource (DER) activities
- Recap of stakeholder feedback from the first DER Roadmap session
- Introduce a draft list of cross-cutting issues where the OEB and IESO are collaborating, including potential areas for enhanced collaboration

# Recap of the OEB/IESO Joint Engagement

- In response to stakeholder feedback on the need for greater and more visible coordination between the IESO and OEB in relation to DER integration, both organizations are hosting this public forum
- Stakeholders and staff from both organizations have identified a list of cross-cutting issues that would benefit from enhanced coordination
- Joint Engagement sessions will take place approximately every six months, alternately hosted by the IESO and OEB, and leverage existing forums where possible (e.g., IESO's DER Roadmap engagement sessions and OEB's Framework for Energy Innovation (FEI) consultation)

# Recap of OEB/IESO Joint Engagement - Objectives

- Provide clarity to stakeholders on what topics and issues are being addressed by each organization and in what forums
- Identify key cross-cutting issues and demonstrate to stakeholders how and when they will be addressed
- Ensure IESO and OEB efforts are appropriately coordinated in order to make timely progress on each organization's efforts and DER integration as a whole

# Recap of OEB/IESO Goals for DER Integration

## OEB

- To facilitate DER deployment and adoption that enhances overall value to energy consumers

## IESO

- To maximize the value DERs can provide to Ontario's electricity system by addressing challenges and opportunities within the IESO's mandate

# Stakeholder Feedback Key Themes

- Feedback was provided in response to the June 22<sup>nd</sup> IESO DER engagement

Feedback theme	Response
Stakeholders suggested clarity on OEB and IESO areas of focus and responsibility.	A key aim of the OEB/IESO Joint Engagement is to provide clarity on the actions of each organization in order to help stakeholders understand where their issues of interest are being addressed. Additionally, the <a href="#">OEB/IESO DER Placemat</a> , helps identify the areas of focus and responsibility for each organization.
Some stakeholders stressed the importance of transparency and stakeholder input in the Joint Engagement process.	The IESO and OEB will continue to engage stakeholders in a transparent manner in the OEB/IESO Joint Engagement for cross-cutting issues as well as on other DER-related initiatives of the two organizations in accordance with the IESO's <a href="#">Engagement Principles</a> and the <a href="#">OEB's Stakeholder Engagement Framework</a> . Draft cross-cutting issues to be addressed are being presented today for stakeholder feedback.
Some stakeholders suggested ensuring barriers to DER deployment at all levels be addressed and enabling the full potential value of DERs.	The OEB's and IESO's objectives and activities capture the areas identified. The IESO is largely focused on transmission level value and barriers and the OEB's FEI is primarily focused on distribution level value and barriers. Through the cross-cutting issues work, both organizations are looking to address the barriers to DER deployment.

# Stakeholder Feedback – Cross-Cutting Issues

- Cross-cutting issues have been identified by stakeholder feedback from the DER Roadmap session on June 22<sup>nd</sup>, where the OEB/IESO Joint Engagements were announced, as well as internal DER discussions with IESO and OEB staff from past work in these areas
- The following list is a draft of these cross-cutting issues with high-level commentary of why they're relevant, existing OEB/IESO work on each issue, and collaboration and potential ways to enhance collaboration
- Next steps for each cross-cutting issue are outlined, as well as how the OEB and IESO will follow up on today's discussion in the next OEB/IESO Joint Engagement session

# Draft List of Cross-Cutting Issues

- Pricing, programs, & procurements interactions
- Evolution of distribution-level business models
- DER used as non-wires alternatives (NWA)
- Data and information sharing
- Transmission-Distribution (T-D) operations coordination

# Pricing, Programs, & Procurements Interactions (1/4)

## Context and issues:

- Investment in, and operation of, DERs can be incentivized by pricing (e.g., coincident peak pricing, dynamic rates), programs (e.g., Save on Energy) and procurements (e.g., RFP, auctions, markets)
- The OEB and the IESO will engage stakeholders on the prioritization and sequencing of relevant issues to be considered, including:
  - Requirements and guidelines that the OEB needs to consider in relation to cross participation and value stacking, such as addressing the risk for conflicting obligations that may render a resource unable to meet both the IESO and distribution obligation at the same time

# Pricing, Programs, & Procurements Interactions (2/4)

## Context and issues (continued):

- Addressing the impact of pricing structures and programs on the wholesale and distribution markets by the IESO and OEB, as appropriate
- OEB requirements and guidelines necessary to ensure that one customer's choice does not negatively impact another as markets for energy services evolve

# Pricing, Programs, & Procurements Interactions (3/4)

Relevant work and current collaboration:

- IESO is initiating the [DER Market Vision Project](#) (MVP) in October to develop enhanced participation models for DERs in the IESO-Administered Markets (IAMs)
- The IESO's [DER Potential Study](#) will explore the DERs that are likely to be economic and/or emerge in Ontario over the next 10 years and provide insight into how best to capture the value these resources can provide
- The OEB expects some of these issues to be examined by the [Framework for Energy Innovation Working Group](#) (FEIWG) in subsequent phases of the FEI consultation. As a member of the FEIWG, the IESO will provide input as appropriate

# Pricing, Programs, & Procurements Interactions (4/4)

## Future Collaboration:

- In the [Ontario DER Impact Study](#), commissioned by the OEB, ICF identified the potential of local markets emerging as likely requiring attention in the mid- to late-2020s, in line with the proposed implementation timing of the IESO's DER Market Design Project
- IESO will explore cross participation (participation in local programs/markets and wholesale) with respect to eligibility in the IAMs as part of the DER Market Design Project and the OEB will contribute to this work as appropriate
- The IESO and the OEB will further consider options and timing for addressing this cross-cutting issue and will report back to stakeholders at the next OEB/IESO Joint Engagement session

# Evolution of Distribution-Level Business Models (1/3)

## Context and issues:

- With increasing penetration of DERs, Local Distribution Companies (LDCs) and other entities (e.g. aggregators, service providers) may take on new roles and responsibilities to ensure the reliable and efficient operation of the electricity system
- Options for distribution-level evolution, as well as the roles and responsibilities involved, will need to be explored and defined
- Interactions with the transmission-level will need to be understood (e.g. what activities are required at the distribution level to enable smaller resources to participate at the wholesale level and who would carry out these activities)

## Evolution of Distribution-Level Business Models (2/3)

Relevant work and current collaboration:

- The OEB's FEI consultation is investigating DER usage by LDCs. As a member of the FEIWG, the IESO will provide input as appropriate
- The two organizations are collaborating on the DER [OEB/IESO Joint Targeted Call](#) through the OEB Innovation Sandbox and IESO Grid Innovation Fund to demonstrate the potential of DERs to provide electricity services to both the wholesale and distribution level and solutions to related market or regulatory barriers

# Evolution of Distribution-Level Business Models (3/3)

## Future Collaboration:

- The OEB expects that issues relating to utility roles including ownership of DER assets will be considered in subsequent phases of the FEI consultation
- IESO is launching the *Transmission-Distribution Coordination Working Group* (TDWG) to engage LDCs and the OEB, as appropriate, on the roles and responsibilities of LDCs in enabling wholesale market participation as part of the IESO's [DER Market Vision and Design Project](#)

# DERs Used as Non-Wires Alternatives (NWAs) (1/4)

## Context and issues:

- Enabling NWAs requires a more granular approach to both needs identification and options analysis, including capturing local needs with sufficient granularity and formalizing methods for evaluating technical and economic feasibility
- Where NWAs on the system involve multiple beneficiaries, there is a need for clarity on the process for NWA approval and how cost responsibility should be addressed
- As distribution and transmission planners work to consider a wider array of options for longer term system planning, guidelines and methods for procuring DER will need to be developed

## DERs Used as Non-Wires Alternatives (NWAs) (2/4)

Relevant work and current collaboration:

- In February 2021, the IESO published the [Regional Planning Process Review](#) (RPPR) report, which provides options and recommendations for improvement to the regional planning process
- As part of the OEB's Regional Planning Review, the [Regional Planning Process Advisory Group](#) (RPPAG) is considering certain recommendations from the IESO's RPPR final report that the OEB is taking the lead on
- The two organizations are collaborating on the [OEB/IESO Joint Targeted Call](#) to pilot and assess the effectiveness of DERs in providing additional value, e.g., using them as NWAs

# DERs Used as Non-Wires Alternatives (NWAs) (3/4)

Relevant work and current collaboration:

- The OEB's FEIWG is tasked with developing a number of high-value, non-utility-owned DER use cases as alternatives to traditional solutions to meet distribution system needs
- The OEB's May 2021 [letter](#) provides regulatory clarity to LDCs with respect to partnership in the IESO's [Local Initiatives Program \(LIP\)](#)

# DERs Used as Non-Wires Alternatives (NWAs) (4/4)

## Future Collaboration:

- The IESO will engage with the OEB on work related to the NWA Solutions Options Development and Procurement Mechanisms for NWA (which are activities reflected in the IESO's DER Roadmap)
- The IESO Grid Innovation Fund is currently providing support to projects that are evaluating the potential of DERs used as NWAs (e.g., NRStor *5MW Clear Creek NWA Merchant Battery Project*, Powerconsumer/NODES's *Finding Value in Local Energy Markets*)
- The OEB and IESO will be evaluating the results of the first cycle of the [Local Initiatives Program \(LIP\)](#) to assess utility targeted CDM solutions to meet regional and local needs

# Data and Information Sharing (1/3)

## Context and issues:

- The OEB and the IESO, as appropriate, must define authority and responsibilities to collect data, use and share data regarding issues such as DER operation, facility connection and DERs' service commitments in order to manage a more dynamic/flexible system with high-levels of DER penetration
- The IESO and LDCs work together as part of impact assessments when DERs seek to connect and intend to provide transmission-level services. They will need to share more information on registration or enrollment of DER participants in their respective procurements and programs
- The IESO and LDCs need processes and infrastructure to receive meter data and potentially telemetry from DERs to manage the system in real-time, assess performance, and conduct settlement

## Data and Information Sharing (2/3)

Relevant work and current collaboration:

- The two organizations are collaborating on an [OEB/IESO Joint Targeted Call](#) to pilot telemetry, metering, monitoring and control solutions for managing the system and administering wholesale and distribution level services
- The IESO is actively participating in the OEB's [DER Connections Review Consultation](#) as a member of the working group, the purpose of which is to identify barriers to the connection of DERs, and where appropriate, to standardize and improve the connection process
- Workstream #2 in the OEB's FEI consultation focuses on information that LDCs need from DER providers to effectively operate and make future system plans

# Data and Information Sharing (3/3)

## Future Collaboration:

- The IESO will engage the OEB and LDCs in the [DER Market Vision and Design Project](#) to determine the data required from LDCs and DER market participants to enable wholesale market participation
- As part of Workstream #2 in the FEI consultation, the OEB expects to examine data sharing practices to promote transparency and information sharing among relevant players. As a member of the FEIWG, the IESO will provide input as appropriate

# T-D Operations Coordination (1/3)

## Context and issues:

- As DERs participate more in the wholesale market to provide transmission-level services, coordination between the IESO and LDCs' system operations will be increasingly important to ensure reliability of the electricity system
- The IESO and LDCs will need to coordinate throughout the real-time market and system operations processes
  - IESO can benefit visibility into distribution conditions, e.g. outages, switching
  - LDCs can benefit awareness of DERs' schedules and dispatch on their systems
- In an environment where DERs also provide distribution services, more detailed coordination will be needed, including to avoid conflicting instructions

## T-D Operations Coordination (2/3)

Relevant work and current collaboration:

- The two organizations are collaborating on the [OEB/IESO Joint Targeted Call](#) to pilot coordination between IESO real-time dispatch instructions and similar instructions at the distribution level as well as real-time visibility of DERs
- The IESO has representation in the working groups for both the OEB's [DER Connections Review](#) and the FEI consultations and will provide input as appropriate

# T-D Operations Coordination (3/3)

## Future Collaboration:

- It is expected that the OEB and LDCs, as appropriate, will be participating in IESO's *T-D Coordination Working Group (TDWG)*
- As part of the [IESO's York Region NWA Demonstration](#), the IESO will be conducting the DER Scenarios & Modeling Study to model reliable T-D coordination protocols in detail
- OEB and LDCs will be engaged as part of the IESO's [DER Market Vision and Design Project](#), which includes design related to T-D coordination to enable reliable participation in the IESO-Administered Markets

# Questions for Stakeholder Feedback

- Does this draft list capture the major cross-cutting DER integration issues for collaboration between the OEB/IESO?
- If not, what other issues related to DER integration should the IESO/OEB collaborate on?
- Are there elements of the cross-cutting DER integration issues that require attention in the near-term that are not currently being addressed? If so, what are those issues and what are your perspectives on why they need near-term attention?

Please use the feedback form found on the [DER Roadmap webpage](#) to provide feedback and send to [engagement@ieso.ca](mailto:engagement@ieso.ca) by November 10<sup>th</sup>

# Questions on OEB Updates

- If you have any questions on the OEB DER Related Policy Consultations Updates, please email the OEB at [FEI@oeb.ca](mailto:FEI@oeb.ca)

## Next Steps

- IESO and OEB to return to stakeholders in Spring 2022 (approximately 6 months from now) with an updated list, action items, and progress updates on cross-cutting issues
- Prioritization and sequencing of the issues to be addressed will benefit from input from all stakeholders given the range of topics identified
- IESO and OEB to continue work together with stakeholders to address cross-cutting issues through forums/initiatives identified in this presentation

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# Thank You

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