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**JANUARY 31, 2022**

# Transmission-Distribution Coordination Working Group (TDWG)

Introduction

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# Today's Agenda

- Introduction to TDWG (15 minutes)
- IESO DER Market Vision Project (30 minutes)
- Break
- T-D Coordination Background Presentation (1 hour)
- Break
- IESO DER Scenarios & Modelling Study (30 minutes)
- Open Discussion (30 minutes)

# Objectives of the TDWG

- The TDWG will provide a forum (with a clear scope and time-bound deliverables) for in-depth engagement on T-D coordination
- By Q1, 2023 develop conceptual coordination protocol(s) that detail the communications among the IESO, Local Distribution Companies (LDCs), and Distributed Energy Resource (DER) participants in the wholesale market
- Coordination protocol(s) developed with the TDWG will be shared with the IESO's broader stakeholder community through the DER Market Vision Project (MVP) engagement and expected to form the basis of new market rules to support new DER participation models that the IESO has committed to implement by 2026

# DER Roadmap

- The IESO has developed the Distributed Energy Resource (DER) Roadmap to provide clarity on IESO objectives, initiatives, and timing for DER integration into wholesale markets to increase competition and unlock options to meet the province's reliability needs
- IESO goal for DER integration: to maximize the value DERs can provide to Ontario's electricity system by addressing challenges and opportunities related to DER integration within the IESO's mandate

# DER Roadmap Objectives

1. Wholesale Market Integration - Introduce expanded participation model(s) that enhance DERs' ability to compete to provide the services they are technically capable of providing (expected 2026)
2. Transmission-Distribution (T-D) Coordination - Implement functional operational coordination model enabling wholesale market participation and develop a plan for longer-term coordination enhancements (expected 2026)
3. Enabling Non-Wires Alternatives (NWA) - Develop approaches to identify needs, value alternatives, and identify acquisition methods for non-wires solutions (i.e. address barriers within IESO purview) (expected 2024)

# IESO T-D Coordination Initiatives

Near term, the IESO will continue to investigate T-D coordination methods in order to inform the [DER Market Vision Project](#)

- Launch the *T-D Coordination Working Group* to work closely with LDCs and other stakeholders to inform the DER Roadmap's T-D coordination activities
- Implement 2nd year of the [IESO's York Region NWA Demonstration](#) (2021- 2022) and prepare lessons learned and other final reporting material
- As part of the York Region Demonstration, undertake a *DER Scenarios & Modeling Study* (2022) to model reliable T-D coordination protocols in detail

Longer term, the IESO will continue to explore the options and scope needed to integrate DERs in the wholesale market, and ultimately implement coordination processes as part of the [DER Market Design Project](#) (2023-2026)

# Transmission-Distribution Coordination

- To support both transmission and distribution level reliability, transmission-distribution (T-D) coordination processes are needed to better integrate DERs in wholesale system and market operations
- The IESO, LDCs, and DER participants will need to share information in a timely manner and ensure there is sufficient awareness (e.g., with respect to outages, limits on DERs, and dispatch of DERs, etc.) among the parties
- If distribution services are also sought from DERs, then T-D coordination processes will also be needed to ensure there are no conflicting instructions, double counting, or other unintended consequences

# TDWG Membership - Organizations

IESO	Enwin Utilities Ltd.	Opus One
Ministry of Energy (MOE)*	Hydro Ottawa	Quanta Technology LLC
Natural Resources Canada (NRCan)*	Oakville Hydro and Oakville Enterprises Companies (OEC)	Open Access Technology International, Inc. (OATI)
Ontario Energy Board (OEB)*	Halton Hills Hydro Inc.	I-EMS Group Ltd
Electric Power Research Institute (EPRI)	Electricity Distributors Association (EDA)	Power Advisory (on behalf of ESA, AEMA, CanREA)
Hydro One	Elexicon Energy	University of Waterloo
Alectra Utilities	Survalent	Entegrus Powerlines Inc
Energy + Inc	Peak Power	Versorium Energy Ltd.
Anwaatin Inc.	Guidehouse	Grand Council Treaty #3
Toronto Hydro	Ryerson University	Essex Powerlines Corp

## TDWG Membership (continued)

- Full membership list is available in the Terms of Reference (TOR)
- Ali Golriz from IESO Innovation and R&D team will chair the TDWG and Dina Shoukri from IESO Operational Effectiveness will be vice-chair
- There will be additional IESO representation from the IESO Wholesale Market Development team and IESO Transmission Planning

# Anticipated Member Activities

- Contribute to materials development and review meeting materials in advance
- Actively participate in scheduled meetings and contribute to discussion topics
- Bring forward relevant perspectives/initiatives from respective organisations
- Commitment to problem solving, collaboration and exchange of ideas
- Observer members will have the opportunity to contribute to discussions but will primarily attend for informational purposes

# Administration of Meetings

- Meetings expected to take place on a quarterly basis, with additional ad-hoc meetings as necessary
- Meetings will be held virtually, and will not be recorded
- Meeting materials will be made available to the working group at least one week in advance of meetings
- Draft meeting notes will be available within one week following a meeting for TDWG members' review. Members will have one week to provide feedback.
- The IESO will finalize the meeting notes upon receipt of feedback and will post the materials on the engagement page within one month of a meeting

# Administration of Meetings

- Members may, from time-to-time, be requested to provide written submissions to support their positions and will be asked to provide the submissions within two weeks in these instances
- If members are requested to share confidential or proprietary information, the feedback will be summarized and/or aggregated to protect any confidential information

## Next Steps

- Members are asked to review the Terms of Reference and provide feedback, if any
- IESO is soliciting topics and presentation materials that are relevant to the TDWG's objectives for the Q2 meeting
  - As will be expanded upon in forthcoming material, specifically on distribution "override" scenarios, distribution contingency practices, and distribution automation
- We welcome members reaching out to us and are happy to have discussions with members in between the formal TDWG meetings
  - Please send email communications to [innovation@ieso.ca](mailto:innovation@ieso.ca)

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# Thank You

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