



Transmission-Distribution Coordination Working Group

Meeting #7 - TDWG Refresh and Workshop Exercise

June 16, 2023

System and Sector Development, IESO

Today's Agenda

- IESO: Opening Remarks (10 minutes)
- IESO: Terms of Reference, Deliverables and Work Plan (30 minutes)
- Alectra: A Distributor Perspective on Protocols (20 minutes)
- Break (10 minutes)
- ICF: Functions and Capabilities Workshop Introduction (10 minutes)
- ICF: LDC Operational Coordination Functions Background (40 minutes)
- Lunch break (30 minutes)
- Workshop: LDC capabilities and enabling solutions (1.5 hours)



Terms of Reference, Deliverables and Work Plan

Recap: TDWG Meetings Summary

- Meeting #1 (Jan 2022): Introductory and background materials
- Meeting #2 (May 2022): T-D definition and coordination models
- Meeting #3 (Jun 2022): Override, outage, and IESO market processes
- Meeting #4 (Sep 2022): New York's coordination manual
- Meeting #5 (Nov 2022): Draft protocol for a Dual Participation model
- Meeting #6 (Feb 2023): Draft protocol for a Total DSO model

Integrating TDWG Feedback into Path Forward

IESO heard from TDWG members	IESO's proposed actions
<ul style="list-style-type: none">• Strong interest in detailing the Total Distribution System Operator (T-DSO) model	<ul style="list-style-type: none">• Work with TDWG to fully develop protocols for T-DSO and Dual Participation (DP-DSO) models
<ul style="list-style-type: none">• Ensure shared understanding of TDWG members' unique perspectives	<ul style="list-style-type: none">• Provide opportunity for information sharing, dialogue, questions and follow-up
<ul style="list-style-type: none">• Need for evaluating operational opportunities and challenges with the coordination models	<ul style="list-style-type: none">• Engage TDWG members to lead deliverables within the TDWG and support other deliverables
<ul style="list-style-type: none">• Need for better sense of direction in the TDWG efforts across future meetings	<ul style="list-style-type: none">• Work with TDWG to develop a set of deliverables, statements of work (SOWs), and work plan
<ul style="list-style-type: none">• Clarify relationship with DER Market Vision and Design Project and coordinate across initiatives	<ul style="list-style-type: none">• Share TDWG progress with DER MVDP stakeholders and vice versa
<ul style="list-style-type: none">• Recognize the potential for future policy and regulatory developments	<ul style="list-style-type: none">• Stay engaged in sector dialogue and appropriately prepare for potential evolution

Recap: Sector DER Objectives and Goals

- IESO [DER Roadmap](#): The IESO's DER integration goal is to maximize the value DERs can provide to Ontario's electricity system by addressing challenges and opportunities within the IESO's mandate
- IESO [DER MVDP](#): The Market Vision and Design Project (MVDP) will explore, design, and implement new participation models for DER and DER aggregations (DER(A)) to integrate into the wholesale energy and operating reserve markets
- [TDWG](#): Develop implementation-ready operational protocols, detailing coordination among IESO, LDCs, and DER(A), as DER(A) participate in wholesale market services and may provide services to the distribution system as non-wires alternatives (NWAs)
- OEB [FEI Report](#): In January 2023, the OEB released its Framework for Energy Innovation (FEI) report which, "among other things, invited LDCs to apply for an incentive mechanism to encourage the use of third-party DERs as NWA"

Terms of Reference Refresh

- Proposed edits to the Terms of Reference (TOR) extend TDWG and reflect feedback
- Draft TOR shared for review
 - TDWG supports the DER Market Vision and Design Project
 - Objective is with respect to implementation-ready T-D protocols
 - TDWG expected to be in place until Q4 2024
- Focus on operational practices and technical considerations for reliable DER(A) operation
- Draft Deliverables and Work Plan document has been shared for review
 - Five separate deliverables are being proposed
 - Seeking TDWG members to lead three of the deliverables
 - Expectations for deliverables management outlined

Ontario Pilots Evaluating Coordination Models

- IESO supports exploration of coordination models through the Grid Innovation Fund (GIF), including in partnership with the OEB's Innovation Sandbox
- Pilots will provide empirical evidence and experience with different coordination models

LDC (lead or partner)	Project Name	DSO Model Piloted	Total Project \$	Total IESO \$	Start Date - End Date
Essex Powerlines	DSO Pilot Project / PowerShare	T-DSO / DP-DSO	\$8.1M	\$3.9M	March 2022 - March 2025
Toronto Hydro	Benefit Stacking T&D NWA Pilot	T-DSO / DP-DSO	\$4.0M	\$1.9M	March 2022 - March 2025
Hydro Ottawa	Electric Vehicles (EV) Everywhere	T-DSO	\$4.8M	\$2.4M	March 2022 – March 2025
Alectra Utilities	York Region NWA Demonstration	T-DSO	\$11M	\$5.0M	Piloting completed Oct 2022



Feedback and Next Steps

Feedback Questions (1/2)

1. Any general feedback on the proposed (1) Terms of Reference and (2) Deliverables and Work Plan documents?
2. Should TDWG meetings be recorded and/or transcribed?
3. Are the deliverables too ambitious? Will we as a working group be able to deliver?
4. Are there any deliverables (or components of deliverables) that should be added in? Are there any deliverables (or components of deliverables) that are unnecessary and can be de-prioritized?

Feedback Questions (2/2)

5. Are you interested in leading the development of any of the deliverables or participating in sub-groups related to any them? If so, please specify the deliverable of interest and why you are well suited for it.
6. Are there any other T-D coordination models that should be investigated? If so, why do you think it may be appropriate in the context of the operation of the Ontario electricity system?

Next Steps

- EPRI DER Scenarios & Modelling Study draft paper is expected to be released in July and a webinar is expected during the IESO's July stakeholder engagement days
- Please use the feedback form found under the June 16, 2023 entry on the TDWG webpage to provide feedback and send to engagement@ieso.ca by July 7, 2023
- IESO will discuss leading the deliverables with TDWG members that express interest and will select deliverable leads prior to TDWG meeting #8.
- Proposed that at TDWG meeting #8, the deliverable leads will provide brief presentations of their SOW and plans for the deliverables, among other agenda items
- Proposed to present a work plan for the deliverables at TDWG meeting #9