

# Transmission-Distribution Coordination Working Group (TDWG)

## Meeting #15 Notes

**Meeting date:** July 26, 2024

**Meeting time:** 9:00 – 12:00 PM

**Meeting location:** Virtual

### Meeting Objective:

- Deliverable A: Share information on select existing requirements from the IESO market rules and manuals relevant to Transmission-Distribution (T-D) coordination.
- Deliverable B2: Discuss possible future communication to support Distribution System Operator (DSO), Distributed Energy Resources participants and aggregators (DER/A), and IESO coordination.
- Deliverable A: Walk through the swim lane diagrams for service stacking T-D coordination protocols.

### Agenda Item 1: Introduction materials (IESO)

- Ali Golriz opened TDWG Meeting #15 and informed the working group members that the next TDWG meeting is expected in September.
- Shreya Dutta presented the recap slides on TDWG objectives, past meetings, and feedback questions for Meeting #15.

### Agenda Item 2: Deliverable A - Highlighting Select Existing IESO Requirements Relevant to T-D Coordination (IESO)

- Nima Omran (IESO) presented slides to briefly highlight four select existing requirements from the IESO market rules/manuals relevant to T-D coordination.
  - Two requirements related to cases where DERs are utilized either for distribution services only or have no active participation in any services.
  - Two requirements related to management of distribution and DER/A outages for cases where DER/A are registered with the IESO.
- With respect to the first requirement, a working group member asked who exactly is responsible to inform the IESO if there is a material change (currently defined as 20 MW) in output from DER/A. It

was clarified that the specific requirement under discussion relates to DER/A that are not registered with the IESO and the responsibility is with LDCs.

- There was a question about whether distributor need to report 'momentary' outages. The IESO team committed to briefly follow up on this topic in a future TDWG meeting.
- There was a discussion about the extent to which the existing requirements are being applied today.
  - The IESO team confirmed that the requirements are existing and in force.
  - However, certain requirements (e.g., LDCs notifying the IESO of demand management control actions as part of distribution-level DER/A activations), may not have been applicable historically.
  - With increasing deployment and utility use of DER/A, the conditions that trigger these requirements are expected to emerge in the future.
  - The IESO may also investigate and refine requirements as part of the DER Market Vision and Design Project.

### **Agenda Item 3: Deliverable B2 - Future Communications to Support DSO / DER Markets (EPRI)**

- Brian Seal (EPRI) provided insights on future communication approaches to support T-D coordination. During the presentation, Brian highlighted:
  - Differences between group and device-level communication
  - Stages of DER integration and appropriate communication strategies
  - Existing communication standards for (DER/A) integration
  - Criticality of the security and resiliency of grid-related communication
- A working group member asked for elaboration on DER/A being considered mission-critical. In response, it was noted that unlike robust contingency plans in place for the bulk power system, use of DER/A for local services often lacks backups. Additionally, despite being sited in a distributed manner, DER/A often rely on central offices or computer systems, introducing a 'single point of failure'.
- There was a detailed discussion on the IEEE 2030.5 communication standard, including:
  - The standard evolved from Smart Energy Profile (SEP), which saw limited devices that were interoperable with it.
  - The latest version of IEEE 2030.5 (approved but unreleased) has advanced from device-level control to group-level control for aggregations.
  - Different communications standards involve varying levels of detail and complexity, with IEEE 2030.5 having higher data and bandwidth requirements.
  - There continues to be investment in IEEE 2030.5 to expand its coverage to different communication needs/areas.
- There was a brief discussion of U.S. efforts to put in place unique identifiers for individual DERs.

#### Agenda Item 4: Deliverable A - Service Stacking T-D Protocols (IESO)

- Ali Golriz presented an overview of the T-D protocols for 'service stacking,' designed to facilitate DER/A participation in services across both the transmission and distribution grids.
- This was a continuation of a discussion from TDWG Meeting #14 and focussed on the swim lane diagrams for five specific processes for operational T-D coordination.
- A working group member asked which party exactly would structure bids/offers to the wholesale market. It was clarified that the party depends on the coordination model:
  - Under the Dual Participation (DP-DSO) model, it is the DER/A participant.
  - Under the Total DSO (T-DSO) model, it is the DSO.
  - Under the Market Facilitator model, the draft protocols indicate that it is the DSO.
- The working group engaged in a brief discussion on considerations relevant to settlement (which, generally, is beyond the current scope of the TDWG).
  - The importance of developing incentive-compatible mechanisms was highlighted, where pricing for DER/A providing distribution-level services and that for transmission-level services are not in conflict.
  - It was noted that if the operation of DER/A reduces transmission-level system loading, it would have Locational Marginal Price (LMP) value.
  - A working group member underscored the need for detailed settlement-related discussion beyond the TDWG's current scope.

#### Action Log Summary

IESO staff maintain an ongoing action log to track actions related to TDWG meetings and their resolution. The log will be reviewed at the start of each TDWG meeting.

Date	Action	Resolution
Jul 26, 2024	IESO to follow up on momentary outages and reporting requirements	
Jul 26, 2024	IESO to circulate meeting notes among TDWG members by Aug 2	
Jul 26, 2024	TDWG members to provide comments via feedback form and send to <a href="mailto:engagement@ieso.ca">engagement@ieso.ca</a> by Aug 16	
Jul 26, 2024	IESO to post all meeting materials to the <a href="#">TDWG webpage</a> by Aug 23	