

NOVEMBER 9, 2022

Transmission-Distribution Coordination Working Group (TDWG) – November Meeting

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Today's Agenda

- Introduction & Feedback Summary (IESO) – 15 minutes
- Market Vision Project T-D Update (IESO) – 15 minutes
- D-D Coordination (Hydro One) – 30 minutes
- Break – 10 minutes
- Draft T-D Coordination Protocol (IESO) – 30 minutes
- Open Discussion – 30 minutes

Past TDWG Meetings

- Meeting #1: Introduction to TDWG, introduction to Transmission-Distribution (T-D) coordination, overview of Distributed Energy Resources (DER) Scenarios & Modelling Study
- Meeting #2: T-D interface working definition, WG feedback discussion, Distribution System Operator (DSO) models in scope, additional detail re: DER Scenarios & Modelling Study
- Meeting #3: Energy Systems Integration Group (ESIG) “override” example, IESO outage processes, and timing of relevant participant-facing IESO Market Renewal processes
- Meeting #4: Local Distribution Company (LDC) outage notifications, distribution Non-Wires Alternatives (NWA) service pilot, Joint Utilities of New York’s DSP Communications and Coordination Manual
- Meeting #5 (today): Draft conceptual T-D coordination protocols for Dual Participation Model, DER Market Vision Project (MVP) T-D Update, D-D coordination, open discussion

TDWG Member Feedback

Are there circumstances where the distribution system is reconfigured and DER can continue to operate? Does the treatment depend on size of the DER, whether transfer trip is being used, loading on the feeder, etc.?

Feedback

There are circumstances where the DER can be supplied by an alternate feeder. Typically DER that are <250kW can be fed from an alternate supply without transfer trip. If a DER is >250kW then they can be transferred to an alternate supply if:

- a) They have transfer trip to alternate feeder or
- b) They can guarantee their output is <50% of the feeders minimum load

IESO Response

Other pieces of similar feedback were also received.

Thank you for this clarification.

TDWG Member Feedback

Are there circumstances today when the T-D interface or transmission station that a DER is connected to changes due to reconfiguration of the distribution system?

Feedback

Yes, there are circumstances when the T-D interface or TS that a DER is connected to changes due to inter-station ties on the distribution system. For instance, loads and DERs can be transferred between stations through such ties, thereby changing the transmission station that the DER is connected to. In these instances, the DER may or may not be able to continue to operate, depending on the connection agreement in place. The circumstance could be a planned or unplanned outage.

IESO Response

Other pieces of similar feedback were also received.
Thank you for this clarification.

TDWG Member Feedback

What operational data about loading, reconfigurations, constraints, DER operations, etc. is being shared between host and embedded distributors today? What method and frequency is used for any data exchanges?

Feedback

There is limited information sharing between embedded-host distributors today. The agreements between both parties typically indicate that the embedded LDC must contact the Host Distributor and inform them of any load transfers within their system (load and DER). The Host Distributor typically has peripheral views of the entire TX/DX system and can warn the Embedded Distributor of any issues they might not have visibility to. In terms of best practice, it is typical for the Host Distributor to notify the Embedded Distributor of any load transfers or alternate supply points affecting their point of connection.

IESO Response

Based on the feedback, information about load transfers and emergencies is shared across the D-D interface.

At today's TDWG session, Hydro One will be presenting on the D-D interface, providing additional details on coordination needs.

The draft T-D protocol being shared in the TDWG session today proposes that information about DER operation is also shared across the D-D interface.

We look forward to discussing further as part of the 'open discussion' today.

TDWG Member Feedback

In managing a NWA project, when do distributors expect to identify that there is a need to operate DER? How good is distributors' "visibility" into the need in the day-ahead and 3-4 hours prior to real time?

Feedback

There is ability to undertake day-ahead load forecasting activities. At this time, granular visibility 3-4 hours prior to real-time is limited.

IESO Response

Thank you for this feedback. A take-away based on this is that LDCs will in the near term be making most of their decisions for DER to operate for distribution NWA purposes in the day-ahead timeframe or many hours in advance of real-time.

TDWG Member Feedback

Based on the New York DSP Coordination & Communication Manual, are there any notes or considerations that the IESO should bear in mind in drafting conceptual T-D coordination protocols for Ontario?

Feedback

Consideration should be given to Ontario's unique and differing (as compared to New York) structure with respect to inclusion of the distribution-distribution (D-D) interface in the protocols, which adds a significant layer of complexity.

It could be more efficient if the aggregator and distribution utility were to coordinate (e.g. system constraints) prior to the aggregator submitting a bid to the ISO. This would avoid unnecessary back-and-forth that takes place in the final stage of the day-ahead process.

IESO Response

We look forward to working with the TDWG to capture coordination across the D-D interface for "override" procedures and for visibility purposes where the DER is providing services to one distribution level entity (i.e. host or embedded distributor).

Agreed – the draft protocol that will be discussed at the TDWG session today takes this approach.

Feedback Questions

DER Market Vision and Design Project - T-D Coordination Foundational Questions

- Are the IESO's recommendations for T-D coordination appropriate for foundational models? Do any recommendations involve risk for distributors that would inhibit DER(A) participation in wholesale market?

Hydro One's Distribution-Distribution Coordination

- Any feedback on Hydro One's presentation?

Conceptual T-D Coordination Protocol for Dual Participation Model

- Does the draft conceptual T-D protocol for the Dual Participation model presented provide the opportunity for sufficient coordination among parties?
- Are there any gaps/concerns with the draft T-D protocol presented?

Next Steps

- Please use the feedback form found under the November 9 entry on the [TDWG webpage](#) to provide feedback and send to engagement@ieso.ca by November 30
- IESO is aiming to hold the next TDWG meeting in January 2023, which will include a presentation on the draft results from the DER Scenarios & Modelling Study.



Thank You

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