

IESO Feedback Form

Transmission-Distribution Coordination Working Group (TDWG) – March 28, 2024

Feedback Provided by:

Name: Jamie McGowan

Title: Operations Specialist

Organization: Hydro One

Email:

Date: May 3rd, 2024

Following the March 28, 2024 Transmission-Distribution Coordination Working Group meeting, the IESO is seeking feedback on a number of questions related to transmission-distribution coordination.

Please provide feedback by April 25, 2024 to engagement@ieso.ca. Please use subject header: *TDWG*. To promote transparency, this feedback will be posted on the [TDWG webpage](#) unless otherwise requested by the sender.

The IESO will work to consider and incorporate comments as appropriate and provide responses at the next TDWG meeting. Thank you for your contribution.

Specific Questions for Comment/Feedback:

Deliverable A: Distribution Reliability Overview

Are there any other distribution reliability considerations important for T-D coordination?

Deliverable B2: Telemetry Requirements for Distributed Energy Resources

Q1: Are the proposed telemetry requirements for DER/As reasonable? Please explain any challenges and suggest solutions to overcome them.

Q2: Are there any telemetry pathways, other than those mentioned in the deck, that can be utilized to meet the telemetry requirements for DER/As?

Q3: What entity is best positioned to serve as a Telemetry Aggregator and why?

Q4: What data is required to represent losses or electrical distances of DER/As in EMS, and where should the data come from? Please suggest possible approaches.

Deliverable A: Distribution Reliability Feedback

Nothing further to add. Thanks for the opportunity to present.

Deliverable B2 Feedback:

Q1: Do we need to consider a future where <10kW (ex. residential rooftop solar) begin to participate in the DER market? If so, would we need another tier of Telemetry Requirements (IEEE 2030.5)?

Q2: Internet based protocols (IEEE 2030.5) or possibly Substation Modernization Platforms (SMP) Gateways could be investigated for 'Low Performance' DER.

Q3: Large LDC's and Host Distributors could play a significant role in telemetry aggregation, as they have the IT infrastructure, tele-comm paths, and IT staff to support.

Q4: There is a lot of data required to accurately calculate losses in an EMS system from the Transmission Station to the DER site. Some examples would be:

- Conductor type (impedance) and length of each section to calculate impedance of line.
- Mid-feeder voltage regulator impedance
- accurate modelling of loads to support power factor calculation (MW, MX)

We believe that it is not feasible to accurately model distribution losses in an EMS. An ADMS is required.

However, there could be a possibility to provide Total Power and Generation at a specific aggregate point (ie feeder head). An LDC could provide this either through State Estimated values or a calculation of the MW at the aggregate point subtract all tele-metered generation in MW (excluding non-telemetered DER).

General Comments/Feedback:

The most significant changes to the telemetry requirements is the classification of the 'Low / Medium Performance' DER's, which would include DER's >100kVA, rather than 250kVA. Although this would enhance the ability for the LDC's to model their system, it could be cost prohibitive for DER's, due to the telecomm requirements they would now face. We may need to relax telecomm requirements (latency etc) to reduce costs for DER between 100kVA – 250kVA. Maybe it is possible to create another tier of telemetry requirements for DER between 100kVA -250kVA, that want to participate in the future DER market (ie. dispatchable), where telemetry would be required.