# Feedback Form

## Enabling Resources Program (ERP) – Distributed Energy Resources (DER) Integration Project – Market Integration

## Meeting Date: October 15, 2026

### Feedback Provided by:

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**Date: October 30, 2026**

Following the **October 15, 2026**, engagement session, the Independent Electricity System Operator (IESO) is seeking feedback on the items discussed during the webinar. The presentation and recording can be accessed from the engagement web page.

Please submit feedback to engagement@ieso.ca by **October 30, 2026**. If you wish to provide confidential feedback, please submit it as a separate document, marked "Confidential." Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

## ERP's DER Integration Project

Please provide your feedback and comments on the information presented this engagement which included the following topic areas:

## Front-of-the-Meter DER/A Participation Model

| Topic | Feedback |
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| Do stakeholders have any questions or clarifications required on the DER/A requirements to participate in the IAM?<br><br>**Why is the IESO asking:**<br><br>To confirm a shared understanding and maintain consistency in messaging related to DER/A requirements. | PowerShare supports a practical wholesale-market pathway for front-of-meter DER aggregations that preserves distributor operating authority and enables future local/bulk service stacking.<br><br>PowerShare's intended contribution is a lower-cost, standardized interface across LDC territories, with coordinated market access and future local-service opportunities. Common processes should remain usable by independent aggregators and MSPs. |

## Wholesale Market Settlements – Front of Meter DER/A

| Topic | Feedback |
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| Please provide feedback on the potential impacts of this approach, including any barriers, risks, or unintended consequences that could affect DER participation in wholesale markets under a DERA framework.<br><br>Please provide examples, evidence, or supporting materials that address this trade-off, including how the proposed approach ensures fair treatment of DERs relative to directly connected resources; avoids inappropriate cost shifting or cost avoidance among participants; and maintains efficient market participation while minimizing unnecessary administrative and settlement burdens.<br><br>**Why is the IESO asking:**<br><br>The IESO's proposed participation model is technology-agnostic and enables multiple resource types to participate within a single aggregation. This is intended to lower barriers for smaller DERs and facilitate access to wholesale markets. While some technologies have provisions to exempt certain costs (e.g. energy storage may be exempt from certain GA costs/applicable transmission tariffs), DERA-connected resources will not be eligible for technology-specific exemptions as the IESO is taking a technology-agnostic approach. This pragmatic approach balances implementation and ratepayer value. | PowerShare supports common aggregate dispatch and settlement on the assumption that future T-D coordination, through the TDWG T-D protocols, will enable LDCs to review DERA Resource Plans and apply distribution constraints to contributors within specific sub-sections of a TDI. This would preserve broad aggregation opportunities while allowing LDCs to address localized operating limits and NWS needs without constraining the entire TDI unnecessarily.<br><br>There is also a structural scale issue in ensuring "fair treatment" between DERA contributors and directly connected resources. Where one large resource may incur one site's metering and service overhead, an equal-sized aggregation incurs those obligations at every contributor. Aggregation pools market capability but does not, under the proposed approach, pool fixed metering costs. The IESO should compare total implementation and recurring costs per contributor and per MW, rather than treating identical site-level rules as sufficient evidence of equitable treatment. |

| Topic | Feedback |
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| Is there any feedback on the IESO's proposal to settle with the MP (aggregator) and not the individual DER contributors?<br><br>**Why is the IESO asking:**<br><br>To avoid compensating a DERA twice for the same service, the IESO will act as the settlement agent for a DERA that is registered to participate in the IAM.<br><br>When participating in the IAM, a DERA signals to the IESO that a portion of its service is intended to meet local distribution system needs/non-wholesale program requirements, or where it deviates from dispatch due to conditions outside of the IESO's control, the IESO shall continue to settle the DERA against the dispatch signal sent to the resource and the response that the IESO measures at the aggregate level.<br><br>Isolating the services delivered or withheld in response to different stakeholder's needs from a single aggregate's measurement poses a significant technical challenge. To ensure that the wholesale market remains balanced and financially neutral, the IESO expects the aggregator to settle with the relevant stakeholder or distributor for the portion of the service that it has offered to other programs or is unable to deliver in response to an IESO dispatch. | PowerShare supports settling wholesale performance at the aggregate level rather than requiring settlement at every contributor. However, that does not resolve which party should administer the combined local/bulk payment interface. We request that the IESO assess Distribution-Level Settlement (DLS), explored in *General Comments*, as an arrangement in which the LDC administers settlement for distribution-connected resources or aggregators and reconciles the wholesale component through an approved IESO-LDC arrangement. Existing embedded generation reconciliation processes provide an example of a the sufficiency of LDCs conducting settlement for IESO services.<br><br>Under this option, the IESO would retain wholesale dispatch, pricing, aggregate performance assessment and market governance; the distributor would retain local operating authority and responsibility for its local services; and the aggregator would retain contributor scheduling, contracts and downstream allocation responsibilities unless agreed otherwise.<br><br>The potential benefit is one coordinated statement and reconciliation process for wholesale energy, local availability/activation, adjustments and agreed fees. It could reduce duplicated interfaces and make service stacking easier as local markets develop. |

| Topic | Feedback |
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| In the illustrative example on slide 21, where a FTM DER/A is simultaneously offering services both to the bulk and distribution grid during any given interval:<br><br>*Distributor*<br><br>What information would the distributor need from the IESO for the distributor to settle with the DER/A for the distribution portion of the service?<br><br>*Market Participant / Aggregator*<br><br>In addition to currently available information from the IESO, what additional information would the market participants/aggregators need to accurately settle downstream with the DERA contributors?<br><br>What challenges do participants/aggregators see with settling individual contributors for performance when the aggregate response to the IESO dispatch involves inefficient or directionally divergent scheduling of underlying contributors?<br><br>**Why is the IESO asking:**<br><br>Building on the previous question, the IESO proposes to settle with the DER aggregate owner and expects that the aggregate owner will settle with individual DER contributors for their portion of the service. The IESO does not intend to control and will not have visibility into individual DER contributor's response but will only consider the aggregate's response when settling with the DERA. | Distributor information requirements:<br>- Market offers or Resource Plan for each DER/A<br>- Dispatch instructions IESO-> DERA<br><br>PowerShare encourages following the TDWG-framed T-D coordination interfaces as a basis for settlement regardless of process owner (see General Comments for DLS and ILS). The IESO would share dispatch information with the LDC, while the market participant would provide price-quantity information through its Resource Plan. If these protocols are implemented and the information is shared, the LDC could combine it with applicable market prices, contributor-level metering and local-service records to conduct settlement for local and wholesale services. |

## Wholesale Metering – Front of Meter DER/A

| Topic | Feedback |
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| Do you foresee any concerns or challenges with adopting the proposed metering implementation approach for FTM DERs directly connected to the distribution system (reference Slide 38)?<br><br>Are there any barriers that DER operators, aggregators, or any other DER stakeholders will face if required to utilize wholesale metering installations for each of the DER contributors that contribute to a front-of-the-meter aggregation?<br><br>If so, please describe the barrier in as much detail as possible, including:<br>• Why it is a concern or challenge.<br>• Any business, operational, technical, or financial impacts.<br>• The specific needs or requirements that would help address the concern.<br>• Potential solutions or alternative approaches that could mitigate the issue.<br>• How your proposed solution would benefit DER operators, aggregators, customers, and the broader DER stakeholders and existing market participants.<br><br>Your feedback will help us better understand implementation considerations and identify practical approaches that support reliable market participation while minimizing unnecessary burden on stakeholders.<br><br>Besides the IESO, will other entities need access to the meter readings to support their activities? If so, explain a preferred measurement source (i.e., | Yes. Contributor-by-contributor wholesale metering and MSP obligations risk making small front-of-meter resources uneconomic even where their aggregate can reliably meet market requirements. Essex Powerlines' PowerShare GIF pilot identified wholesale qualification, metering/telemetry and data access as material participation barriers for this class of DER.<br><br>Business and financial impacts:<br>Each site may require ongoing MSP/data services. These fixed obligations recur across contributors, so the administrative cost per MW can rise as contributor size falls. Consider obtaining representative MSP/LDC quotations and publish small-, medium- and large-contributor cost cases for DER/A.<br><br>Proportionate metering requirements:<br>For smaller DER contributors, minor measurement variances are unlikely to create material settlement impacts at the aggregated level. Metering requirements should therefore be proportionate to contributor size and aggregated risk of material variances.<br><br>Proposed alternative:<br>Develop an LDC-provided metering pathway for eligible small contributors, beginning with the below-2-MVA facilities addressed by Chapter 6, section 4.6. Assess whether an IESO-approved utility meter can serve as the conforming standalone meter and as the common measurement source for both local and wholesale settlement. See General Comments for additional discussion.<br><br>Implementing DLS with LDC-provided metering would require a review of MSP responsibilities and any necessary alternative compliance arrangements. These requirements should be manageable if the LDC's role is limited to clearly defined metering, data and settlement functions, without transferring wholesale market participation responsibilities or associated liabilities to the LDC. Where necessary, |

direct meter read), intended usage, read frequency, etc.

**Why is the IESO asking:**

For FTM DERs that plan to participate in the wholesale market, either on their own or as part of a DER aggregation, the proposed approach builds on existing wholesale metering requirements and *market rules* already used for *embedded generators*. This provides a familiar and practical path forward for implementation. By leveraging established processes, DER owners and aggregators can more easily manage metering registration, metering data collection, and ongoing compliance throughout the life of their assets. In addition, Market Rules Chapter 6, Section 4.6 provides flexibility for *embedded generators* with a capacity below 2 MVA. For example, these *facilities* may be able to use a standalone meter – either main *meter* or alternate *meter* - and may be subject to reduced testing and emergency preparedness requirements. These provisions can help lower both upfront and ongoing metering costs while continuing to meet market requirements.

We welcome feedback on whether this approach is practical for your organization, any challenges you foresee, and opportunities to further reduce barriers while maintaining metering accuracy, reliability, and compliance.

Please share any suggestions for improving metering data access, clarifying stakeholder roles and responsibilities, streamlining processes, limited participation restrictions on DERs metered through this pathway could address residual requirements rather than imposing the full MSP responsibility set on LDCs.

| Topic | Feedback |
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| or introducing additional data, controls, or alternative metering approaches. We are also interested in ideas that would support the successful implementation of FTM DERs today while enabling the continued growth and scalability of DER integration in the future. | |

## General Comments/Feedback

### About PowerShare

PowerShare Inc. is a growing collaboration of eleven Ontario local distribution companies working together to develop and operationalize Distribution System Operator (DSO) capabilities and Local Energy Markets (LEMs). Building on practical experience with distributed energy resource (DER) integration and local flexibility, PowerShare provides a shared-services model through which member utilities can develop common strategies, tools and operating approaches for DER coordination, local flexibility procurement and broader DSO readiness. By pooling expertise and creating scale across multiple service territories, PowerShare is intended to help LDCs remain central to an increasingly distributed electricity system while supporting customer participation, grid reliability, affordability and Ontario's growing electricity needs.

### Feedback Foreword

PowerShare appreciates the IESO's clarity that it does not intend to operate distribution systems. Equally, distributors are not seeking to assume responsibility for transmission system operations or wholesale market administration. The ERP framework should preserve these complementary roles while enabling practical coordination, including distribution-level settlement arrangements that support local and bulk service participation without transferring wholesale market responsibilities to LDCs.

PowerShare supports a phased, collaborative approach that establishes the essential coordination arrangements first, while allowing roles and solutions to evolve through implementation experience. An initial framework could recognize the LDC/DSO's central role in distribution coordination while preserving flexibility in how those functions are delivered. Sharing lessons from coordination challenges would help participants refine processes together over time.

PowerShare's feedback is guided by a longer-term vision for LDCs/DSOs to administer settlement for all distribution-connected resources, with DERA settlement providing a practical step toward that outcome. Alongside T-D coordination, distributors could develop shared DSO services that simplify market access, expand aggregation opportunities across LDC territories within shared TDIs, and support stackable local and wholesale services. This approach would build on established distributor capabilities, providing a coordinated interface for aggregators and the IESO while preserving each distributor's operating authority and the IESO's wholesale-market responsibilities.

### Arguments

A. Opportunity Profile; Who is this For?
B. Distribution-Level Settlement (DLS)
C. LDC-provided Standalone Meters for DERAs

### A. Opportunity Profile; Who is this For?

This DERA pathway is primarily intended for front-of-meter, distribution-connected DERs seeking access to the wholesale market, particularly aggregations of smaller resources that fall within the minor generation facility framework. These resources may not have an IESO contract or an immediate opportunity to participate in LEM/NWS programs but are expected to have a medium- to long-term interest in providing wholesale energy, capacity, ancillary services and, where available, stackable local services. It could also accommodate resources with existing IESO or LEM/NWS contracts seeking to provide additional services outside their contracted periods. The model is therefore most relevant to relatively sophisticated DER owners and energy service providers seeking sustained market participation, rather than behind-the-meter resources, DERs interested exclusively in local services, or major generation facilities above 20 MVA.

The existing population of resources fitting this profile is limited, with distribution-connected front-of-meter generation largely comprising IESO-contracted embedded generators already settled by LDCs. Enabling this emerging participation model is therefore an opportunity to build on established LDC metering and settlement functions, with proportionate requirements that support economic wholesale participation and future stacking of local services.

### B. Distribution Level Settlement (DLS)

The IESO presents the settlement solution for DERA as a continuation/application of existing market rules and processes while not fully reflecting its proposed settlement of distribution-connected (and local-bulk stackable) DERs as a deviation from another existing arrangement of LDCs settling and managing payment for embedded generators. There is a feasible outcome where LDCs manage settlement for all distribution-connected resources up to and including settling with resources for all local and wholesale energy services, then validating or reconciling in IESO-LDC settlement in a manner similar to today's embedded generation processes. For discussion purposes, call this potential process Distribution-Level Settlement (DLS).

Assuming LDCs conducting DLS have access to the following information:

- 5-minute meter interval data
    - Primarily from utility meters approved by IESO as *alternate meters*, and visible to IESO through [new or existing] meter data submission arrangements
    - Secondarily from MSPs or IESO[1] through existing interval data sharing methods
- 5-minute LMPs for all territories
    - Public and available information
- IESO dispatch to resources
    - In-scope for ERP T-D coordination; assuming that the design horizon is suitable to have this information available.

[1] Noting the deviation from IESO market integration proposal insofar as a registered market participant is required to have a Metering Service Provider (MSP) and may not require an MSP if utility-metered in this way. Stranded wholesale responsibilities of MSPs should not be transferred to utilities and thus the necessity of MSP representation should be a topic of further exploration.

- Resource wholesale market offer Price-Quantity pairs (PQs)
    - Potentially in scope for ERP T-D coordination; also interacts with potential DSO coordination models where the resources provide "resource plans"[2] to DSOs of their planned activity including PQs to consider for local services and apply local constraints as necessary.

Through a DLS process, LDCs would build on their existing embedded generation settlement processes and tools to coordinate local and wholesale service revenues for distribution-connected resources. This approach could serve DERAs, customers and the IESO equally well by extending established LDC/DSO capabilities to address distribution-level coordination and settlement needs, rather than duplicating those functions within the IESO. It would also support stackable services while preserving the IESO's responsibility for wholesale market operations.

DLS contrasts with IESO-led settlement of distribution-connected DERAs, where wholesale and distribution-level services would be settled through separate processes. The IESO would settle wholesale services and the LDC would settle the distribution-level portion. Separate settlements may create reconciliation or service-attribution issues, particularly where individual contributors support different local and wholesale services. LDC-administered settlement could provide a single point to reconcile these quantities before settlement with the DERA.

### C. LDC-provided Standalone Meters for DERAs

Contributor-level wholesale metering and recurring MSP costs can create a disproportionate burden for smaller DERs. Aggregation pools market capability but does not pool these fixed costs, which recur at each site. An LDC-provided metering pathway could build on existing utility metering functions to support economic access to markets, while providing a common measurement source for local and wholesale settlement.

PowerShare recommends that the IESO establish an approved utility-meter pathway for eligible DERA contributors, building on the standalone metering provisions discussed under Chapter 6, Section 4.6. Under this approach, LDCs would offer a default metering service for eligible standalone meter candidates, particularly resources below 2 MVA and 17 GWh annually. Resources requiring main metering would continue to use MSPs. All participating resources would remain subject to applicable five-minute interval, accuracy and data-quality requirements. IESO telemetry access requirements and costs to comply for such DERA contributors is an area for additional consultation.

For eligible contributors using LDC-provided conforming standalone meters, the IESO should consider an exemption from the requirement to retain an MSP. Alternatively, clearly defined metering and data responsibilities could be fulfilled by the LDC, with any remaining MSP

[2] Resource Plans are identified as the primary coordination vector between DSO and DER/A in all three DSO models (Total DSO, Dual Participation DSO, and Market Facilitator DSO) outlined in the Transmission-Distribution Coordination Working Group's June 2025 Protocols.

duties explicitly addressed. This arrangement should not transfer unrelated wholesale-market responsibilities or liabilities to distributors. Where necessary, proportionate participation restrictions could address residual requirements.

An LDC-provided metering pathway would therefore support both economic market access and the coordination of stackable services. Minor measurement variances at small contributors are unlikely to materially affect aggregate settlement outcomes, supporting proportionate metering requirements. A common LDC measurement source would also enable verification of localized NWS delivery and reconciliation of local and wholesale quantities under DLS.