

Feedback Form

Electricity Demand Side Management (eDSM) Framework – April 24, 2025

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Following the April 24, 2025 engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback on the items discussed during the webinar. The webinar presentation and recording can be accessed from the [Electricity Demand Side Management \(eDSM\) engagement page](#)

To promote transparency, feedback submitted will be posted on the Electricity Demand Side Management (eDSM) engagement page unless otherwise requested by the sender. If you wish to provide confidential feedback, please mark “Yes” below:

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Please submit feedback to engagement@ieso.ca by May 8, 2025. Please use subject: Feedback: eDSM Engagement Session

2025-2027 Program Plan

What
considerations
should the
IESO keep in
mind as we
implement the
2025-2027
Program Plan?

1. A) LIP coordination with Stream 2, involvement of LDCs, and importance of adherence to TDWG principles.

In the spirit of the enduring nature that characterizes the 2025-2036 DSM framework, the EDA urges the IESO to consider the design and sequencing of Local Initiatives Programs (LIPs) in IESO's Stream 1 programming to ensure that they are future-proofed and aligned with forthcoming, LDC-led and delivered Stream 2 programs. We acknowledge that LIPs are programs designed and delivered by the IESO to address bulk system constraints, but we see opportunities to drive efficiency, particularly in coordinating with LDCs on identifying where bulk and local constraints happen coincidentally and understanding distribution system requirements in some cases. The EDA proposes that the IESO work with LDCs in the area of concern. By incorporating LDCs' inputs when the IESO is designing LIPs, it can unlock substantial opportunities for enhancing operational efficiency and maximizing system value by effectively addressing constraints. It is also important to adhere to the principles and T-D coordination protocols as designed and put forward through the IESO's Transmission and Distribution Working Group (TDWG), for the variation of the DSO framework. Through the work of the TDWG, it is widely recognized that LDCs have a significant role in the successful operationalizing, and potential dispatching of controllable assets on the distribution grid. The coordination protocol documentation as part of Deliverable A (T-D Coordination Protocols) outlines these mechanisms, for each of the model variations. Sufficient visibility into DER assets contracted to the IESO through Stream 1 progress is essential for the LDCs to assess forecasting impacts on the local distribution grid as well.

Since LDCs are required to consider non-wires solutions (NWS) through the OEB's BCA Framework, many of their system distribution planning and needs identification informing their NWS and Stream 2 programs will come from this exercise. Although LIPs address bulk system needs, LDCs are in the right position to identify local areas that are constrained that coincide with bulk system peaks. Coordination between the IESO and LDCs on LIPs (or any form of dispatchable assets including demand response) is imperative and will support optimizing the use of distribution assets—preventing wear and tear on distribution assets in areas that are lightly loaded but coincide with a bulk system need that the IESO is trying to address—while helping the IESO address transmission-constrained areas identified by its transmission planners. While no decision was made, several coordination protocols were developed within the TDWG through significant sector engagement and alignment considerations. Coordination between LDCs and the IESO have reliability and safety considerations, that underscores the **importance of LDCs and the joint grid responsibility for operationalizing resources within distribution service territories, and could be aligned with the coordination protocols being established through the IESO's TDWG.** This will **ensure local system safety, reliability, and efficiency.**

This coordination is also important to ensure the value stack can be maximized. As technologies and their applications evolve and improve, and as local flexibility markets emerge (particularly as more DERs come online and could be used in demand response programs), the IESO should include in the 2025-2027 Program Plan implementation the coordination with LDCs for DER resources that may already be planned for Stream 2 programs. As mentioned before, because LDCs are required to consider NWS in the OEB's BCA Framework, it is important to ensure that there are enough DERs available in the ecosystem for this purpose, i.e., not already signed up for a LIP.

As the only entities with visibility into distribution system impacts—and the responsibility and capability to safely and reliably operate the grid—**LDCs must retain meaningful control over asset dispatch, namely reviewing any dispatch signals before they are sent to assets, assessing potential system impacts, overriding as necessary, and relaying approved commands to those assets.**

If LDCs are not responsible for dispatching assets on their systems, it could lead to the following distribution-level risks:

- **Voltage Excursions:** Uncoordinated load control can increase voltage variability, risking violations of over- or under-voltage limits.
- **Feeder Overloading and Peak Rebound:** Uncoordinated demand response (DR) can overload equipment, particularly during load restoration.
- **Stress on On-Load Tap Changers and Capacitor Banks:** Large, rapid demand swings can force frequent operations of voltage regulation devices, accelerating wear.
- **Protection Miscoordination:** Sudden load drops or reversals can cause overcurrent relays or fuse sections to respond incorrectly.
- **Power Quality and Asset Degradation:** Rapid switching of customer devices can cause power quality issues, such as flicker, and contribute to accelerated equipment wear.
- **Asset Degradation:** Repeated thermal cycling from DR events can reduce the lifespan of distribution assets.

The distribution system is inherently more complex and dynamic than transmission. Real-time changes, frequent reconfiguration, and unplanned outages require a level of understanding and visibility that only LDCs have.

Furthermore, multiple European projects, including the **EU SmartNet** and **CoordiNet** projects, have shown the consequences of inadequate coordination. In SmartNet, DER aggregation for TSO needs aggravated local congestion when DSOs were not involved. In CoordiNet, flexibility services procured by the TSO had to be curtailed by the DSO in real time due to unexpected voltage issues—demonstrating the critical need for DSOs to validate dispatches and maintain real-time telemetry during activation. Both projects recommend establishing clear protocols requiring DSO pre-

validation and active monitoring during any ISO/TSO dispatch to prevent local network violations.

The only mechanism to avoid such issues if they occur would erode the value of eDSM and lead to lack of trust in deployment of these programs.

Along with the benefits of LDC coordination and collaboration outlined above, it is imperative to highlight the LDC's role as the party responsible for managing the local distribution systems in a safe and reliable manner. It is essential to reaffirm that LDCs have a meaningful role in operationalizing the dispatch of assets on the distribution system, and LDCs should be provided with full visibility and meaningful control of the DER assets connected to the distribution grid. Given that the adequate distribution system visibility sits within the LDCs' systems and processes, it is imperative that the role of assessing DER integration impacts on the local grid is housed with the LDCs. This responsibility goes beyond the initial Connection Impact Assessments and requires ongoing operational oversight. LDCs must have full visibility into all dispatch actions and have the responsibility of coordinating all dispatches in their service territory, and retain override authority to protect system reliability.

1. B) Engagement with key stakeholders, including LDCs

The EDA also urges the **IESO to engage early and often with key stakeholders, including LDCs**, regarding any changes to Stream 1 program rules and eligibility, the addition of new technologies, changes to incentives, etc. While we understand that Stream 1 programs are designed and delivered by the IESO as provincewide programs, all of these program components have impacts that yield significant downstream impacts to LDCs' operation and maintenance of their distribution assets, the management of their customers' accounts, or both.

2. Beneficial Electrification and Avoided Consumption

The use of avoided consumption is an area that is best supported by the LDCs due to the nature of potential additional load (smaller than it could be) and the requirement to engage the LDC when a load is added to the grid. This sentiment is similar to any DER measures. Adding load to the grid is a benefit to the LDCs' revenue which could offset any lost revenue for energy efficiency measures and remove any need for an LRAM creation as the LDCs drive more energy efficiency measures beyond 2027.

The EDA believes that the **IESO could apply Beneficial Electrification for non-residential customers** (i.e., electricity customers in Ontario that: (a) are not classified as residential in the most recent Yearbook of Electricity Distributors published by the OEB, and (b) are connected to the IESO-Controlled Grid, per the [IESO's Retrofit Program's Program Requirements](#)), as the electricity sector needs to plan for the eventual complete electrification of heating, domestic hot water and

vehicles. This could be achieved **through avoided consumption**, an existing mechanism in several of the Save on Energy programs. However, a more streamlined process needs to be established to set expectations and improve review times so that each application does not become a case-by-case review.

3. Cost Guides for Customers

For any electricity customer looking to participate in a Save on Energy program, maintaining healthy project economics is likely a key factor in the decision to pursue a measure or set of measures. In this context, the **EDA suggests that the IESO consider developing cost guides for electricity customers** who may be considering participation in any Save on Energy program. Supporting customers in navigating quotes from vendors in this manner could increase program uptake, while improving a project's outcomes as well as the overall customer experience in eDSM.

Additional Opportunities

The IESO intends to increase the scope and scale of its DSM programming over this longer-term framework – where do you see opportunities that should be considered in the next three to six years

1. Inclusion of LDCs in Stream 1 programs involving BTM DERs

The EDA strongly advocates for the IESO to include LDC subject matter experts (SMEs) in the design of any provincewide Stream 1 programs that involve behind the meter DERs or require the direct attention of LDCs' connections departments.

For example, the current Home Renovation Savings Program (HRSP) includes measures using residential rooftop solar panels and residential battery storage but prohibit net-metering—without taking into account the impacts of costs of power control technologies on residential project economics. Another aspect that would have benefitted from early consultation with LDC SMEs is the tracking of accounts: HRSP prohibits residential addresses from participating in net-metering, but per the OEB's Distribution System Code (DSC), LDCs do not have the authority to deny a customer request for net-metering.

Some other issues with HRSP connections that could have been addressed during the program design phase with LDC SMEs include:

- Understanding the process and nomenclature for installing and connecting Solar PV systems.
- Having LDCs work through how these systems would be metered to ensure consistency i.e., two meters or a bi-directional meter.
- Provide LDCs with embargoed detailed information that they could put on their websites to outline the connection process for load displacement solar PV projects in time for the program's launch, so that they could prepare their connections and customer service teams accordingly and be equipped with the proper information upon the program's launch in the face of a potential influx of connection requests.
- Understanding the IESO's objectives, to help formulate a way to support enforcement of the IESO's program rules while maintaining compliance with the OEB's DSC (which requires the LDC to provide net-metering to a customer upon request).

2. Inter-Agency Coordination

Because of the increasingly overlapping nature of DSM and DERs, **the EDA also strongly advocates for improved inter-agency planning and alignment** in programming, initiatives, and consultations on both topics, so that:

- a) LDCs can allocate their resources accordingly, to participate in consultations and to execute the work forming the basis of such consultations, and
- b) the electricity sector does not work at cross-purposes.

For example, it is not uncommon for the same utility departments and personnel to be supporting the OEB's DER Connections Review Subgroups to also be dealing

with customer connections. More importantly, the protocols and detailed coordination frameworks developed jointly by the IESO and multiple LDCs—enabling DER participation across both IESO and LDC programs—must be aligned with the planning and deployment of Stream 1 LIP programs. These frameworks, developed through multi-year, high-engagement initiatives are essential to ensuring LDCs maintain appropriate visibility and control over BTM DERs.

Extensive work has been undertaken to establish and document detailed coordination protocols between the IESO and the LDC community, including input from aggregators and the broader sector. These protocols represent the appropriate coordination mechanism, having been thoroughly vetted and refined through a comprehensive engagement process involving all key stakeholders.

3. Beneficial electrification and avoided consumption

The **EDA believes that using the concept of avoided consumption, the IESO could develop a more streamlined process** so that the various Save on Energy programs' expectations and requirements are more easily known. This can evolve into a beneficial electrification option when beneficial electrification is mandated by the government for non-residential customers. Additionally, an avoided consumption application is very similar to a new construction application (e.g., in the pre-2019 "High Performance New Construction") which is something already planned for 2027, as noted in Table 1 of the IESO's [*2025-2027 Electricity Demand Side Management Program Plan \(with Beneficial Electrification\)*](#).

4. Collaboration with municipalities

Many municipalities have declared climate emergencies and consequently have **set reduction goals for greenhouse gas emissions (GHGs) and energy use, which find alignment with eDSM**. These municipalities have a vested interest in developing, piloting and delivering programs to help their community achieve these goals. Similarly, municipalities may have development objectives and targets for GHG emissions and energy use reductions, in the form of requiring new homes and/or supporting retrofits of existing homes with heat pumps, EV chargers, and/or smart home technology.

Collaboration with the IESO's eDSM team on such efforts could decrease customer confusion, enhance customer experience, and optimize use of funding, be it from ratepayers or taxpayers.

5. New construction

A facet by which the IESO's eDSM programming can increase in scope is in the inclusion of new construction. From both an economic and energy

	perspective, this is the best opportunity to ensure new homes, businesses and communities are built with purpose, built to minimize their energy use, maximize opportunities to generate energy, participate in the local and provincial energy system and increase resiliency in local communities and take advantage of local energy opportunities, i.e., waste heat to district energy systems, increased local generation, etc.

Additional Opportunities

How would you like to be involved? Are there specific topics or initiatives related to DSM that you would like to provide feedback on in future?

The EDA asserts that LDCs must be included in the design of provincewide Stream 1 programs, particularly those that involve BTM DERs. LDCs are the technical experts in their distribution systems and should not be left out of discussions and plans that could potentially negatively impact their distribution systems. Lack of DER coordination between the transmission and distribution system can lead to significant safety and operational challenges that can affect both systems. Uncoordinated load control can result in voltage limit violations, increase asset wear and tear and significantly jeopardize grid safety and reliability.

Moreover, the inclusion and involvement of LDCs soonest in the program design process can optimize the customer interest, participation, and experience.

Though DSM programs are with us today and will continue over the coming 12 years as part of this long-term commitment, the EDA reflects that there are other market developments ongoing in Ontario. The **IESO should continue to contemplate how the outcomes of this process and the likely evolution within the sector will affect the future role and use of those resources in future cycles.** These factors should be explicitly considered in the design of the following cycle. One particular interest of LDCs is visibility into where DERs exist in their service territory so that they can account for the potential impact at the local level.

The EDA suggests the following **types of stakeholdering sessions**:

- Informal stakeholder sessions - Engage with small groups of engaged individuals from across sectors e.g. municipalities, not-for-profits, community groups, local distribution companies, natural gas distributors, to weigh in on and provide feedback in the early stages involved early in the program design and development phase, identify areas of duplication and opportunities to collaborate.
- Formal stakeholder sessions - Engage with a larger group of stakeholders to get feedback, identify areas of duplication and opportunities to collaborate.

The EDA suggests the following **key topics and initiatives** that would be of significant LDC value for consideration in the context of the IESO's eDSM planning:

- Behind the meter technologies
- Grid resource technologies
- New construction programs

The EDA looks forward to continue supporting both LDCs and the IESO in the IESO-LDC DSM Working Groups as the 2025-2036 eDSM Framework unfolds.

Some of the EDA's member LDCs have indicated interest in getting involved in the IESO's eDSM initiatives in the following ways:

- Supporting the IESO and its partners to **drive the avoided consumption initiative** (referenced in our answers to questions 1 and 2 above), including providing real-world examples of current and past projects
- Supporting the IESO and its partners in the **development of a formal avoided consumption process** for heat pump projects
- Participating in forthcoming **working groups** and/or targeted **consultations**, to provide **input on program design**, performance metrics, and customer engagement
- Providing LDC feedback on initiatives relating to **electrification, DER integration, DSM technologies, and grid modernization**
- Collaboration on **pilots or case studies** to demonstrate DSM value, particularly in small- to mid-sized utility contexts.
- **Be considered by the IESO when there is an identified delivery shortcoming.** For example, in northern Ontario, some communities have little to no uptake of provincewide energy efficiency programs due to the lack of availability of contractors and limited service providers. LDCs, if requested by the IESO, could assist where needed to improve and ensure Save on Energy programs are accessible to all electricity customers in Ontario. This could be enabled as part of a **regular IESO feedback loop, in conversation with LDCs** as part of forthcoming working groups and/or targeted consultations.

General Comments/Feedback

The EDA applauds the IESO and the Government of Ontario's leadership in eDSM, particularly by recognizing the specific strengths of LDCs in increasing the uptake of the IESO's provincewide programs. LDCs bring longstanding relationships with their customers, especially in the CI&I sector. LDCs have honed and perfected cost-effective communications channels and are highly effective in amplifying marketing in their local communities, as a trusted brand and the recognized energy experts. LDCs look forward to re-engaging in eDSM activities in supporting the IESO's provincewide programs and continue to look ahead to Stream 2's LDC-designed and delivered local/regional programs that address specific distribution needs.