Feedback Form

eDSM Commercial HVAC DR Program - June 24, 2025

Feedback Provided by:

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To promote transparency, feedback submitted will be posted on the Electricity Demand Side Management (eDSM) Framework webpage unless otherwise requested by the sender.

Following the June 24, 2025 engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the new Commercial HVAC DR Program. The webinar presentation and recording can be accessed from the engagement webpage.

Please submit feedback to engagement@ieso.ca by **July 8, 2025**. If you wish to provide confidential feedback, please submit as a separate document, marked "Confidential". Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

Topic	Feedback
Program Enrollment: How can we best ensure that facilities demonstrate their readiness for effective participation, particularly regarding the potential HVAC DR capacity, operational parameters, and metering readiness. What additional factors should be considered?	Please refer to **General Commentary/Feedback** below, for more detailed discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program. With respect to **Program Enrollment**, the IESO is proposing that load aggregators (**Program Participants**) submit at least 1 MW of HVAC DR load, acting as intermediaries between end-users (**Contributors**) and the **Delivery Agent**, with a portfolio of ready-to-participate facilities. The EDA has the following recommendations: • **Define a clear LDC role in aggregator and resource enrollment:** The IESO should explicitly include LDCs in the process of registering aggregators and enrolling distributed resources that are connected to the local distribution system. This step would ensure that LDCs can assess and coordinate the participation of these resources in a way that aligns with the safe and reliable operation of their systems. • **Ensure LDC visibility into enrolled resources:** The program design should provide LDCs with detailed information about enrolled resources in their service territories, including customer account identifiers, the physical locations of facilities on the distribution network, and the demand response capacity being committed. This transparency allows LDCs to monitor the impact of demand response activities at the feeder and substation level. • **Recognize the operational importance of LDC involvement:** LDC participation in enrollment and visibility into enrolled resources is essential to support distribution system planning and operational needs, such as load forecasting, identifying potential congestion or reliability risks, and ensuring that demand response actions do not conflict with local system constraints or planned maintenance activities. To ensure safety and reliability of the distribution system, LDCs should be provided with all resource locations, advance warning of activation, and the ability to curtail activity. Contracts with end-use facilities should be structured without exclusivity, to allow for resources to participate in local eDSM programs to address distribution system needs. Doing so would align with the concept of "service stacking," as described in the IESO's Transmission-Distribution Working Group (TDWG)'s Deliverable A. Allowing resources to offer services to the transmission and distribution levels of the electricity system would encourage greater proliferation of DERs and their aggregations (DER/A) while simultaneously addressing the energy transition's demand growth. A potential point to review such non-exclusive contracts could be at the end of

	2027, to coincide with the first term of the 2025-2036 eDSM Framework. Some additional factors for consideration include: • Assets should be available for other programs, and not restricted to only one program • Participant agreements should be non-exclusive to allow for participation in Stream 2 (local/regional eDSM programs)
Incentive Structure: What is your perspective on the proposed standard payment incentive structure and payment timelines? Do you see any challenges or opportunities with this approach?	Please refer to **General Commentary/Feedback** below, for more detailed discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program. With respect to the **Incentive Structure**, the IESO is proposing a standard capacity payment of $/MW-season based on the seasonal average demand reduction. The EDA recommends that: • **Local Benefits Adder:** The incentive structure should be designed to allow incremental, locally targeted incentives — in addition to the standard capacity payment — to reflect the value that resources provide to the distribution system. This approach would encourage participation from resources that deliver benefits to both the bulk electricity system and the local distribution system, similar to the Regional Adders used in the Retrofit Program. Enabling LDCs to offer additional incentives for resources in specific locations or with specific characteristics would help address local constraints, improve reliability at the distribution level, and maximize the overall system-wide value of demand response resources. Opportunities: • The IESO should ensure that **LDCs have the capability to stack an additional local incentive adder** on top of a provincial incentive payment **to help address distribution system need.** More feedback on the coordination of dispatch between LDCs and the IESO is provided in the general comments. Challenges: • The program as currently presented seems very restrictive and not stackable.
Eligibility Requirement – Program Participants:	Please refer to **General Commentary/Feedback** below, for more detailed discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program.

What would be a reasonable minimum DR threshold for the Program to consider; what other eligibility elements should be considered?	With respect to **Eligibility Requirements**, the IESO proposes that **Program Participants** (load aggregators) must be legally registered businesses in Ontario with at least 1 MW of aggregated HVAC load, capable of real-time measurement, verification, and reporting of demand reductions and event performance data. The EDA has the following recommendations: • **Restrict aggregations to LDC service territories or zones:** Aggregated resources should be limited geographically to individual LDC service areas or defined zones to support LDC visibility and enable assessment of impacts on the local distribution system. • **Establish a maximum size threshold for distribution-connected resources:** The program should include an upper limit on the size of individual resources connected to the distribution system, with larger resources directed to participate through existing mechanisms such as the Capacity Auction. • **Prohibit mixed transmission- and distribution-connected aggregations:** If larger-scale customers are permitted, aggregations should not combine transmission- and distribution-connected customers within a single portfolio, to ensure clear accountability, appropriate operational coordination, and alignment with system-level and local needs. • **Clarify HVAC-only eligibility and verification:** The IESO should address how participants will demonstrate that committed load reductions come exclusively from HVAC systems, and not from other end uses or energy storage resources, to ensure program integrity. The **proposed minimum of 1 MW (given the current proposed requirements), is generally reasonable. However, using the same minimum capacity requirement as in the Capacity Auction may not always be appropriate**, since the kW capacity of individual HVAC units is likely to be significantly lower than the types of resources used for participation in the Capacity Auction. This would make it much more difficult to aggregate enough resources in individual zones by individual aggregators to meet the 1MW minimum capacity. **The risk of setting a threshold too high for participants at program launch and not recruiting sufficient capacity is likely more consequential than the additional administrative burden** of having too many participants at a lower threshold (e.g. 500kW minimum).
Eligibility Requirement	Please refer to **General Commentary/Feedback** below, for more detailed

– Program Contributors Are there any additional factors or considerations we should take into account?	discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program. With respect to the **Eligibility Requirements** the IESO proposes that **Program Contributors** (end-use customers) must be non-residential customers in Ontario (not participating in the Capacity Auction) with controllable HVAC systems, connected to the IESO-controlled Grid or Distribution System, and not already receiving other IESO- or government-funded DR incentives. The EDA has the following recommendations: • **Enable participation in LDC-led DR programs:** The program should enable end-use customers to also participate in LDC-led demand response initiatives, to align with LDC obligations to consider and implement non-wires solutions and maximize local system benefits. Therefore, the IESO should consider introducing flexibility in its prohibition on receiving other DR-related incentives, allowing contributors to access additional, non-duplicative incentives that address specific local distribution needs. • **Clarify eligibility for contributors providing local value:** The program should recognize and prioritize contributors whose participation delivers both bulk system and local distribution system benefits, ensuring alignment with regional and local planning objectives. Some additional factors and considerations the IESO should take into account: • The incentive may not be sufficient to obtain additional resources, especially if such resources are being excluded from other programs. • As mentioned in our response regarding the Incentive Structure (above), consideration should be given to the additional system value that can be provided by customers located in/or connected to areas of constraint/needs.
Topic	**Feedback**
Events Parameters: Are there any additional factors or considerations we should take into account? Is the notification	Please refer to **General Commentary/Feedback** below, for more detailed discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program. With respect to **Event Parameters**, the IESO is proposing that DR events run June 1–Sept 30 on business days, with 10–15 events per season, each lasting 2–3 hours (within 3–7 pm), triggered by grid needs/market signals, and notified by 12 pm the same day.

period adequate, or would a different notification period better suit your needs and why?	The EDA has the following recommendations: • **Ensure an active LDC role in event notification management and coordination:** LDCs must have an active role in managing and coordinating event notifications with participants whose resources are connected to the distribution system, given the potential operational and reliability impacts of DR events at the local level. • **Define clear, transparent event triggers:** The IESO should specify the thresholds or criteria (e.g., grid conditions, market prices) that will trigger an event, so that LDCs can assess and coordinate the impact on distribution system reliability and operability, avoiding unintended consequences from poorly coordinated activations. • **Clarify the scope and locational targeting of activations:** The IESO should explain whether events will be called uniformly across all participants or selectively based on location or other factors, and ensure LDCs have visibility into which specific end-users will be activated to support operational planning and local reliability. • **Engage LDCs in event notifications and planning:** LDCs should be engaged in advance of activations and provided with details of the specific end-users that will be activated, ensuring they can assess and mitigate any potential adverse impacts on the local distribution system. The IESO should incorporate LDC feedback related to potential activations prior to any event notification being issued. • **Permit LDC-initiated activations for local benefits:** LDCs should also have the ability to issue event notifications to resources that provide locational benefits to the distribution system, consistent with eligibility for regional adders. Additional factors/considerations that the IESO should take into account include: • **The IESO should inform LDCs of all program participants within each utility's service territory, as well as notification of events.** Visibility could be provided through a monthly report listing the address and amount of enrolled load for each customer in each service territory. We would recommend that advanced notice be provided to LDCs a day ahead of the event to ensure distribution grid operations are not negatively impacted. The IESO should also explain the trigger conditions to LDCs, so that they can independently understand and predict potential DR events. • **The program should be future proofed to consider Stream 2 collaboration with LDCs where local distribution peaks may be non-coincident with system peaks.** The IESO should consider that its participant agreements would allow for future participation in local

	programs. It should also consider indicating that most events would be called within the 3-7 PM window while allowing for a larger window in participant agreement language (e.g. 12-9 PM) given local demand peaks do not always align with system peaks. Another way to ensure alignment with forthcoming Stream 2 collaboration would be for the IESO to recognize in this HVAC DR program terms that participants are allowed to enroll in Stream 2 local eDSM programs when they become available. Such consideration of Stream 2 collaboration with LDCs would be aligned with Minister Lecce's directive of November 7, 2024. • Additional considerations around IESO-LDC program coordination and collaboration are found in the general comments below. Notification period commentary: • **Flexibility in activations** may be needed. For example, if there are 10-15 activations, 8-12 would be mandatory. • **Clarification on market signal's scope**: End-use facilities in an area that end up not needing any events would not receive any payments, leaving those end-use facilities and aggregators in a loss situation. It may help end-use facilities and aggregators to understand if the market signal is for the entire province and not restricted to certain areas. • **Cross-zonal aggregations:** The IESO should clarify if cross-zonal aggregations are allowed, and if so, how the IESO would notify the relevant distributors.
Topic	**Feedback**
Performance Parameters: Are there any additional factors or considerations we should take into account? Would using the Capacity Auction baseline methodology with a weather adjustment factor pose any concerns?	Please refer to **General Commentary/Feedback** below, for more detailed discussion of the EDA's overarching recommendations regarding the IESO's proposed HVAC DR program. With respect to **Performance Parameters**, the IESO is proposing that it is to be measured as the seasonal average hourly demand reduction during events, using a weather-adjusted baseline based on the Capacity Auction methodology. The EDA recommends: • **Define the LDC role in performance assessment:** The IESO should clearly define and incorporate the role of LDCs in assessing the performance of distribution-connected resources, given their access to relevant data and the need to align with any validation the LDC may already be performing to assess the resource's potential contribution to local system operations and benefits. Additional factors and considerations for the IESO to take into account:

	• **The need for submetering is unclear** given participants will also be required to submit LDC meter data at the end of the season for the purpose of M&V and settlement. This could result in a barrier for program participation. Unless there is a clear need for ongoing submetering, the IESO could consider requiring aggregators to submeter a portion (e.g. 10-20%) of their enrolled Program Contributors with all required to provide LDC meter data for settlement purposes. • **Knowledge of activation settlement** is needed sooner than the end of season.

General Comments/Feedback

As the energy transition unfolds rapidly in Ontario, LDCs strongly support unlocking electricity demand side management (eDSM) opportunities for their customers. LDCs are ready, willing, and able to work with the IESO to harness distribution and bulk system energy efficiency while maintaining a good customer experience for end-users, and a safe and reliable provincial electricity network. LDCs are the stewards of their distribution systems—putting them in the best position to take a leadership role in eDSM programs.

LDCs are increasingly managing the convergence of previously siloed initiatives from both the IESO and the OEB, particularly in relation to the multiple ongoing consultations on various distributed energy resources (DERs). There is notable overlap between the IESO's consultation on eDSM, the regulatory requirement for LDCs to consider and implement non-wires solutions (NWS), the IESO's Transmission-Distribution Working Group (TDWG), and the OEB's consultation on Distribution System Operator (DSO) capabilities. While the urgency of demand growth necessitates that LDCs, the IESO, and the OEB pursue their respective work on eDSM, NWS, and DSO in parallel, it is essential to ensure that these efforts are properly sequenced and coordinated across organizations and departments.

In the case of the proposed HVAC DR program, the EDA has made several recommendations that support a clearer overarching framework for DER deployment, and the recognition of the need for improved T-D coordination, specifically:

- Ensuring IESO-LDC coordination into location and dispatch of DR resources to ensure ongoing safe and reliable operation of the distribution system (i.e., from enrollment to alignment of incentive structures).
- Respecting the OEB's requirement of LDCs to consider and implement cost-effective non-wires solutions (NWS).
- Ensuring resources are available for Stream 2 eDSM programs by LDCs to address local and/or regional distribution system needs.
- Ensuring the IESO is not presupposing a determination of the OEB regarding the role of LDCs and future DSO capabilities.

The EDA understands that the IESO's TDWG considered approaches and protocols for integrating DERs into the IESO's wholesale market, and that the proposed HVAC DR eDSM program (HVAC DR) is outside

of that scope since HVAC DR are not required to be IESO-Market Participants. However, the need for T-D coordination is not negated when resources are participating out-of-market. The IESO is proposing to acquire a significant amount of new DR resources, and absent coordination with the LDCs will result in inefficiencies, misaligned incentives, and market confusion.

Outcomes of TDWG's collaboration between the IESO, LDCs, and industry stakeholders are instructive to HVAC DR program design. The EDA believes that HVAC DR could serve as a first use-case for operational collaboration between the IESO and LDCs for flexible resources, in a mutually beneficial way for bulk and local system needs.

LDCs understand the IESO's urgent need to ensure resource adequacy, and the importance of ensuring distribution reliability and safety for electricity customers (e.g., brownouts, rebound concerns). Collaborating with LDCs in a more thoughtful and meaningful role in operationalizing the dispatch of assets on the distribution system in HVAC DR (and/or any other flexible resources) would support bulk system operational needs without sacrificing distribution system safety and reliability.

IESO-LDC coordination into location and dispatch of resources to ensure ongoing safe and reliable operation of the distribution system

This proposed HVAC DR program requires LDC involvement and operational protocols, both of which have been discussed and documented by the IESO's Transmission-Distribution Working Group (TDWG). IESO-LDC coordination, including visibility, into location and capacity contribution of contributors in LDC service territory should be a priority in the program design. To optimize the proposed DR program's benefits to the bulk and local systems, **LDCs should have a meaningful role in the dispatch of assets in their service territory. The EDA urges the IESO to collaborate with LDCs to integrate the TDWG's recommendations** to facilitate this outcome. Further, LDCs should be responsible for dispatching resources in their territory based on distribution system conditions.

There are potentially serious operational risks of the IESO dispatching these larger resources, whereby the rebound post-IESO event—especially if coinciding with a local peak—could create reliability and safety concerns at the local level. IESO-LDC coordination regarding the registration, enrollment and dispatch of DR resources is essential to ensure the ongoing safe and reliable operation of the distribution system. This would mean, at a minimum, that the IESO would need to consult with LDCs on what specific information is required from the participants during registration and enrollment so that LDCs can locate them on the distribution system, and then, perhaps leveraging the TDWG principles (e.g. service stacking, have a line of communication between control rooms of the IESO and LDCs to inform of planned DR events (time and duration) in advance of event activation.

OEB's requirement of LDCs to implement cost-effective non-wires solutions (NWS)

The Ontario Energy Board requires LDCs to implement cost-effective non-wires solutions (NWS) to enable avoidance or deferral of costly capital system upgrades required to meet local distribution system needs. Demand response is the best established, most viable form of NWS available to LDCs to meet the OEB's requirement. LDCs are concerned that any commercial HVAC load flexibility that the IESO enrols into this new program will not be shared with LDCs to help meet local peaks that are non-coincident with bulk system needs. This again speaks to the need for IESO-LDC coordination regarding the contributors and eligibility of resources enrolled in Stream 1 to be eligible for Stream 2 and NWS programs as well.

Ensuring resources are available for Stream 2 eDSM programs by LDCs to address local and/or regional distribution system needs.

The program should be future proofed to consider Stream 2 collaboration with LDCs where local distribution peaks may be non-coincident with system peaks. The IESO should consider that its participant agreements allow for future participation in local programs. It should also consider indicating that most events would be called within the 3-7 PM window while allowing for a larger window in participant agreement language (e.g. 12-9 PM) given local demand peaks do not always align with system peaks.

Ensuring the IESO is not presupposing a determination of the OEB regarding the role of LDCs

The roles and functions identified by the IESO for the Program Delivery Agent—such as aggregator registration and enrollment, program eligibility and compliance, data management and verification, event notification and coordination, and settlements—closely align with the capabilities currently being contemplated by the OEB as part of its ongoing consultation on the DSO model. LDCs must also be part of delivering on these functions today given their regulatory obligation to consider and implement NWS. This raises the question of whether duplicating these roles across separate entities is efficient or in the best interest of ratepayers. Greater LDC involvement in these functions is essential to maximizing the value of DR resources and ensuring alignment with local system needs. In addition, given the OEB's responsibility to deliver a DSO Roadmap by the end of the year, as directed following the Minister of Energy and Mines's release of the Integrated Energy Plan, we encourage closer coordination between the IESO and the OEB in defining these roles and ensuring alignment. While we recognize the urgency of advancing this program, it is important not to presuppose the outcomes of the OEB's DSO consultation, which should ultimately guide the long-term allocation of these responsibilities.

In conclusion**, the EDA strongly advocates for the IESO to work with LDCs on details prioritizing visibility, coordination, communication and interoperability between LDCs and the IESO, before moving onto HVAC DR program implementation**. We believe that our recommendations in this feedback form are directly aligned with the government's June 2025 Integrated Energy Plan (IEP), specifically by:

- "empower[ing] families, communities, and businesses to not only use energy, but to produce and store it, making them active participants in our energy future," and
- "enabling the distribution sector of the future," given "soaring electricity demand, including the connection of new homes, industries, and electrified transportation"—the vast majority of which will be distribution-connected.

The EDA asserts that further **postponement of LDC involvement in programs involving T-D coordination would be imprudent**, as reliability issues are emerging now. Coordination issues are material to LDCs today and will have detrimental impacts on their customers if not addressed.