Feedback Form

eDSM Industrial Program Evolution - May 22, 2025

Feedback Provided by:

Name: Andrew Thiele

Title: Sr. Director Policy and Government Affairs

Organization: Energy Storage Canada

Email: [redacted]

Date: June 5, 2025

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 May 22, 2025 engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the current industrial program (Industrial Energy Efficiency Program). The webinar presentation and recording can be accessed from the engagement webpage.

Please submit feedback to engagement@ieso.ca by **June 5, 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
Would a first-come, first-served model with a single sign-off better support your project planning - and are there any risks or challenges you foresee with this approach?	Yes. A rolling application window – as opposed to fixed application windows – would be more efficient and streamlined, and better aligned with project development timelines. IESO should consider recapitalizing the industrial stream if it becomes fully subscribed, before all cost-effective industrial eDSM applications are funded.

Topic	Feedback
Would a tiered, standard-offer incentive – like $/MWh, with potential adders for grid-constrained areas or large projects – make it easier for you to pursue projects? What is your desired incentive ie. $/MWh?	A standard offer incentive like $/MWh reduced is a simplistic price signal for eDSM. It would achieve limited eDSM outcomes without adders that recognize: conservation and efficiency during peak hours as opposed to during off-peak hours (i.e., $\$/MW_p$); and congestion reduction, and increased hosting capacity. Also, it should be noted that: Beneficial Electrification is a targeted eDSM outcome which results in net-increases in electricity consumption; and batteries can deliver eDSM benefits through peak-shaving while also resulting in net-increases in electricity consumption. For both these cases, $/MWh reduced is not an appropriate price signal.

Topic	Feedback
What minimum threshold would align with your projects? What types of projects or facility areas could you see benefitting from a broader eligibility criteria?	No comment.

Topic	Feedback
Would access to audits and feasibility studies help you identify and advance more energy-savings projects? How should it be structured to ensure early assessment lead to real, completed projects?	Yes. In particular, the integration of energy storage in industrial applications would benefit from funding for detailed technical and economic feasibility studies.

Topic	Feedback

Topic	Feedback
What type of support or coordination would make it easier for you to complete projects and access incentives with greater confidence?	No comment.

Topic	Feedback
Are you considering new construction projects? How should the program evolve to better support energy-efficient new construction projects?	No comment.

General Comments/Feedback

A) DEFINE THE ROLE OF ENERGY STORAGE IN INDUSTRIAL eDSM PROGRAMS

Energy storage behind-the-meter (BTM) of industrial customers can provide eDSM and Beneficial Electrification as described below. The IESO should define the role of energy storage as industrial eDSM in program documentation, and ensure that it is explicitly eligible to participate.

1. Reduce peak electricity demand

1.1 Uni-directional demand response (i.e., on-site load displacement). BTM batteries can respond to time-of-use rates and/or other demand response / dispatch signals, by charging off-peak and discharging to on-site load during on-peak hours. Thermal energy storage can time-shift thermal energy end-uses to off-peak hours in response to time-of-use rates, and/or other demand response / dispatch signals.

1.2 Bi-directional demand response (i.e., on-site and feeder load displacement). BTM batteries can also discharge to the grid during on-peak hours when storage capacity exceeds on-site load to displace feeder load.

2. Reduce electricity consumption.

While storing electricity for later use can result in roundtrip efficiency losses on the demand-side, reducing peak electricity demand on transmission and distribution equipment can reduce line losses on the supply-side. Also, inverters are capable of improving power factor and quality and can thereby deliver further efficiency and conservation gains on both the supply- and demand-side.

3. Addressing Growing System Needs

In addition to the bulk system-level benefits that demand-side and distributed energy storage can provide by reducing peak electricity demand and reducing electricity consumption, the deployment of energy storage can increase flexibility, reduce congestion, and defer or delay other infrastructure investments at the non-bulk system level (i.e., non-wires solutions).

4. Beneficial Electrification

"Beneficial Electrification" (i.e., fuel-switching from fossil fuels to electricity with a lower emissions intensity) is most "beneficial" when the resultant load growth does not have adverse or unintended consequences at the bulk- and non-bulk levels (i.e., the resultant load is coincident with when the required generation, transmission and distribution capacity is most available, and *vice versa)*. The deployment of energy storage to better align the coincidence of demand and load growth with the availability of the required generation, transmission and distribution capacity should be considered an integral element of "Beneficial Electrification".

B) DO NOT UNDULY PRECLUDE VALUE-STACKING (AND SERVICE AS NON-WIRES SOLUTIONS)

Energy storage assets deployed as eDSM can fulfill an eDSM function, and also other functions to broaden the components of the value-stack that it captures (e.g., local flexibility market for Non-Wires Solutions, capacity market, etc.) The industrial eDSM program design should enable maximum value-stacking, to maximize the value provided by energy storage to the system, customers, and the rate-base. eDSM funds can deliver a greater impact, if project proponents have flexibility to stack multiple capital and operating revenue streams, and serve multiple functions.

C) ROLE OF LDCs IN PROGRAM DESIGN AND DELIVERY

As presented in "From Small To Mighty: Unlocking DERs to Meet Ontario's Electricity Needs" (December, 2024) , LDCs are well-positioned to take on a greater role in the procurement of Distributed Energy Resources (DERs) as eDSM, Beneficial Electrification and as Non-Wires Solutions (NWS). LDCs are ideally suited to this because of their existing relationships with customers and responsibilities in settlement, connection, and administration. They have deep insights into grid capacity, enabling targeted and efficient deployment. LDCs are investing in grid modernization, enhancing their ability to integrate and manage DERs. Their experience with Conservation and Demand Management (CDM) programs and ability to design localized programs further support their role. Additionally, LDC-led initiatives can be more accessible to smaller-scale projects, avoiding the complexities of larger-scale procurements. This strategic positioning allows LDCs to effectively drive DER adoption, improve grid reliability, and support Ontario's energy and economic development goals. The IESO should continue to engage with ESC, LDCs and stakeholders on the design, delivery and administration of eDSM, Beneficial Electrification and NWS programs by LDCs, to ensure alignment between programs, and to ensure their value is maximal to both the bulk and non-bulk electric systems.

D) IDENTIFYING BARRIERS TO DER ADOPTION AS INDUSTRIAL eDSM

Throughout the implementation of the eDSM Framework and industrial eDSM programs, it would be beneficial for the IESO eDSM team to identify and document barriers that constrain the potential contribution of demand-side measures to cost-effectively addressing growing electricity system needs, and to consumers managing their electricity costs. This information could present an "eDSM lens" to support future decision-making by government, the OEB, and the IESO on system planning, capital investments, and enabling framework development. Examples would include: technical issues such as short circuit limits at certain transmission stations limiting the contribution of DERs to eDSM in certain regions; and rate design issues such as non-coincident demand charges that send an inefficient price signal for off-peak battery charging for certain customer classes. Removing barriers to the adoption of DERs by industrial customers will maximize and optimize the cost/benefit of eDSM programming.