June 11, 2025 By E-Mail

Mr. Ritchie Murray
Acting Registrar
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Mr. Murray:

EB-2025-0156 – Proposed Framework for Implementation of Local eDSM

The DSM Regulatory Working Group (Working Group), co-chaired by the undersigned, is pleased to submit its report, entitled Proposed Framework for Implementation of Local eDSM (Report), for your consideration.

This Report's content responds to the Ontario Energy Board's (OEB) letter to the Conservation and Demand Side Management Working Group Co-Chairs, Tam Wagner and Tim Wilson, dated September 22, 2023. It proposes a streamlined approach to produce prudent requests for ratepayer funding to support local and regional electricity demand side management within a "beneficiary pays" framework, targeting both bulk and local and/or regional distribution system needs. Local and regional programs offer an opportunity to foster innovation in program design and delivery approaches, and have multiple beneficiaries (e.g., avoiding or deferring investment in generation, transmission, and distribution assets).

Further, the Report's content supports the OEB's work to "propose an appropriate cost-sharing mechanism, involving the Global Adjustment and distribution rates, grounded on the principle of beneficiary pays, to fund the development and operation of new energy efficiency programs that provide both system and local distribution benefits," per Minister Lecce's December 2024 letter of direction. In particular, such new energy efficiency programs are to be "i) designed and delivered by LDCs and endorsed by the Independent Electricity System Operator (IESO); ii) address local electricity distribution needs, and also provide value to the bulk electric system; and, iii) have received approval from the OEB for the rate-funded portion of program costs," per Minister Lecce's November 2024 Ministerial Directive to the IESO.

The Working Group looks forward to working closely with you in the design and implementation of this process, to help maximize its contribution to a reliable, affordable and sustainable electricity system in Ontario.

Sincerely,

Evelyn Lundhild
Senior Manager, Demand Side Management, IESO
DSM Regulatory Working Group Co-Chair

Kaleb Ruch
Director, Regulatory Policy & Strategy, Hydro One Networks Inc.
DSM Regulatory Working Group Co-Chair

CC: Tam Wagner, Director, Demand Side Management, IESO
Teresa Sarkesian, President & CEO, Electricity Distributors Association (EDA)
Vince Brescia, President & CEO, Ontario Energy Association (OEA)
Rob Brewer, President & CEO, PUC Services
Scott Mudie, EVP & Chief Operations and Energy Officer, Oakville Hydro
Michael Lister, Director, Regulatory Policy & Strategy, Alectra
Donna Kinapen, Manager, Regulatory Policy & Compliance, Elexicon
Paul Gleason, Chief Risk Officer, ENWIN
Tyler Moore, VP Energy & General Counsel, ERTH
April Barrie, Director, Regulatory Affairs, Hydro Ottawa
Mike Packer, Director of Regulatory Affairs, London Hydro
Mike Pathak, Manager, Climate Action, Toronto Hydro
Andrew Bishop, Senior Advisor, Regulatory Affairs, IESO

The Independent Electricity System Operator (IESO) works at the heart of Ontario's power system. The IESO delivers key services across the electricity sector including: managing the power system in real-time, planning for the province's future energy needs, enabling conservation and designing a more efficient electricity marketplace to support sector evolution.

The Electricity Distributors Association (EDA) represents Ontario’s local hydro utilities, the part of our electricity system closest to customers. Publicly and privately owned utilities, otherwise known as local distribution companies, deliver electricity to residential, commercial, industrial, and institutional customers—powering every community in the province. The sector owns more than $30 billion in electricity system infrastructure and invests more than $2.5 billion annually in the electricity grid—that is the Power of Local Hydro.

The Ontario Energy Association (OEA) is the credible and trusted voice of the energy sector. We earn our reputation by being an integral and influential part of energy policy

development and decision making in Ontario. We represent Ontario's energy leaders that span the full diversity of the energy industry.

Report to the Ontario Energy Board

Proposed Framework for Implementation of Local eDSM

May 2025 (EB-2025-0156)

Prepared by the IESO-LDC DSM Regulatory Working Group

Report to Ontario Energy Board

Proposed framework for implementation of Local eDSM

Prepared by the IESO-LDC Regulatory Working Group

1 Overview

1.1 Introduction

This Report outlines a proposed framework for funding and implementing Local Electricity Demand Side Management (eDSM) programs in Ontario that both target local distribution needs and support provincial energy system objectives in a coordinated, cost-effective manner. Developed under the auspices of the IESO-LDC Regulatory Working Group (the "Working Group"), it responds to recent Ministerial Directives emphasizing the opportunity of beneficiary-pays funding models for local eDSM, as well as leveraging the Ontario Energy Board's (OEB) established Non-Wires Solutions (NWS) Guidelines and Benefit-Cost Analysis (BCA) Framework.

Drawing on stakeholder consultations, relevant policy guidance, and technical expertise from the Independent Electricity System Operator (IESO) and Local Distribution Companies (LDCs), the framework presented herein delineates roles, responsibilities, and processes that will enable distribution-level led eDSM initiatives to complement existing province-wide offerings and access compensation from the bulk system. By pairing robust cost-effectiveness tests with a streamlined regulatory approval pathway, the proposed model ensures that local eDSM programs can simultaneously meet localized infrastructure and reliability requirements while contributing quantifiable value to the bulk electricity system. The Working Group requests the OEB initiate an OEB Consultation to review this eDSM policy proposal. The Working Group prefers a Consultation to provide for a timely review and if implemented, an opportunity for utilities to file their eDSM applications to the OEB in the near future.

Underpinning this initiative is the principle of proportional cost allocation: local ratepayers shoulder those costs aligned with local benefits, while the provincial electricity system—through Global Adjustment (GA) funding—supports broader bulk electricity system benefits. This approach recognizes that strategic investments in local eDSM can yield returns at multiple levels of the grid, thereby warranting transparent mechanisms to fairly distribute costs and benefits among stakeholders. Furthermore, clear reporting requirements, mid-course adjustment processes, and variance accounts are proposed to safeguard ratepayer interests, foster performance and accountability, and enable continuous evolution of effective eDSM as Ontario's energy landscape changes.

This Report details the proposed governance structure, application procedures, and measurement and evaluation procedures necessary to operationalize this framework. In doing so, this Report provide a comprehensive blueprint for effectively integrating LDC-led eDSM programs into the province's long-term reliability and sustainability objectives, thereby meeting the expectations outlined in recent Letters of Direction to the OEB and the Minister's eDSM Directive to the IESO.

1.2 Context

On December 19, 2024, the Minister of Energy and Electrification issued a revised Letter of Direction (LoD)(LINK) to the OEB, setting out the government's 2025-2026 priorities for the OEB and broader energy sector. This new directive builds on the November 29, 2023 LoD (LINK), where the Minister first called on the OEB to re-evaluate and prioritize eDSM—previously referred to as Conservation and Demand Management (CDM)—alongside other NWS. The 2023 LoD also highlighted a report from the Working Group, which introduced a three-stream approach for expanded energy efficiency efforts.

The Minister issued a new eDSM Directive on November 7, 2024 and an amended eDSM Directive on December 19, 2024 to the IESO (LINK) for the period 2025-2036 which provides explicit language regarding funding for Stream 2 eDSM initiatives, specifically under Section F 1.b ("Funding Program for LDCs"). Section F affirms the principle of beneficiary pays and endorses cost-sharing between province-wide GA and local distribution rates for local eDSM programs that deliver benefits to both the local and bulk electricity system—reinforcing the need to reduce barriers to LDC-led activities. Taken together, these Ministerial directives underscore government's commitment to leveraging energy efficiency as a low-cost, non-emitting resource and ensuring that LDCs have a clear pathway for designing and delivering local or regional eDSM initiatives.

Carrying forward the momentum from the Working Group and recent Ministerial guidance, this Report proposes a framework for implementing Stream 2 eDSM within the broader provincial energy efficiency strategy. Drawing on the OEB's existing Non-Wires Solutions Guidelines (NWS Guidelines) (LINK) and BCA Framework (LINK) the framework establishes clear cost-effectiveness tests for eDSM and outlines a methodology to apportion distribution-level versus bulk electricity system benefits and costs. Under this approach, Stream 2 programs that deliver both local and provincial benefits can be funded

proportionally through GA and distribution rates, in keeping with the Minister's focus on cost efficiency, reliability, and growth[1].

In alignment with the new eDSM Directive (Section F) and the 2023 LoD, this Report materially advances Ontario's policy goals for eDSM. It clarifies how LDC-led programs can be funded through a beneficiary pays cost-sharing mechanism, address local system needs, and deliver broader system benefits. In doing so, it continues the momentum started by the 2023 Working Group and fulfills the Minister's call to remove barriers to LDC eDSM activities, while supporting the province's overarching objectives of affordability, system reliability, and regulatory innovation.

1.3 Need for a New Process for Local eDSM (Stream 2)

Ontario's electricity distribution sector has long recognized eDSM initiatives as a cost-effective means to address both local distribution and broader bulk system needs. Although the IESO now administers province-wide electricity energy efficiency initiatives centrally, there is a clear opportunity for LDCs to develop localized programs that capitalize on their unique customer relationships and granular knowledge of distribution constraints. Such programs can deliver targeted local peak demand reductions, foster community-based energy savings, defer distribution system investments, and contribute to overall grid reliability.

Currently, no mechanism exists to allow LDCs to cost-share local eDSM initiatives between distribution rates and the GA in recognition of bulk system benefits. This omission has effectively restricted LDC-driven programs to smaller-scale pilots or rate-funded applications with limited scope. Recognizing this untapped potential, the Working Group proposed a Stream 2 model in 2023, wherein LDC-led programs could be deployed to meet localized constraints while simultaneously delivering bulk system benefits. Underpinning this approach is the concept of "beneficiary pays," ensuring that costs are allocated in proportion to the benefits received by local and provincial ratepayers, respectively.

Under the 2015–2020 Conservation First Framework (CFF), LDCs and the IESO collectively achieved approximately 8.1 TWh of annual energy savings and over 1,000 MW of peak demand reductions. Under this framework many utilities met or exceeded their assigned targets, bolstered by programs tailored to local conditions and facilitated by

[1] For reference, Stream 1 activities are provincewide eDSM programs led by the IESO, and Stream 3 activities are eDSM initiatives producing only distribution system benefits (and no bulk system benefits), which fall under the OEB's Non-Wires Solutions Guidelines for Electricity Distributors (March 2024).

comprehensive customer outreach strategies. For the 2021 through 2024 period, the model for eDSM delivery in Ontario shifted to focus on centralized IESO delivery. This approach has also demonstrated successful results, achieving more than 8.9 TWh of savings, from 2021 through 2023, surpassing targets.

While a centralized approach benefits from economies of scale and a high degree of coordination, the lack of LDC involvement leaves additional eDSM opportunities unrealized. The creation of the Working Group and the 2023 Letter of Direction recognized that incremental eDSM benefits are available in Ontario through a joint model, which leverages the centralized strengths of the IESO and the localized knowledge and capabilities of LDCs.

Under current policy, the opportunity exists for individual LDCs to apply to the OEB for eDSM funding in distribution rates under the NWS Guidelines. In practice, however, few applications for such funding have been approved in the last decade. The lack of successful cases of distribution-funded eDSM can be attributed to the following barriers, amongst others:

1. **Regulatory and Financial Risk**: Developing a robust eDSM program funding request necessitates significant investment of time and resources. The existing framework, has not enabled LDC's to submit proactive program funding requests to the OEB.
2. **Underutilization of IESO Expertise and Duplication Concerns**: The IESO, recognized for its technical and administrative eDSM capabilities, does not have a formal role in reviewing distribution-funded eDSM applications. This disconnect increases the technical risk for LDCs that may lack specialized program-design expertise and contributes to duplication concerns, where clarity about overlapping or similar programs offered by the IESO is difficult to establish and coordinate.
3. **Incomplete Benefit Stacking**: Although the OEB's BCA Framework enables LDCs to count potential bulk system benefits in their cost-effectiveness calculations, local rate funding remains the only available option for LDC-led programs. Because costs are not shared beyond the LDC's service territory, local ratepayers shoulder the entire program cost without the benefit of socializing those costs amongst all beneficiaries of bulk system impacts.
4. **Infrequent Filing Intervals**: The existing framework encourages LDCs to submit eDSM program funding requests during rebasing applications, which typically occur at five-year (or longer) intervals. This protracted timeline can delay solutions for emerging local capacity or reliability constraints. Moreover, these intervals are not

explicitly coordinated with the IESO's planning and implementation cycles, further complicating timely collaboration.

The framework for Stream 2 eDSM outlined in this Report responds to these barriers in a manner that is both practical and conducive with the Working Group's findings. It recognizes the potential of LDC-led programs to address local distribution needs, while also capturing bulk system benefits and equitably allocating costs in line with the principle of "beneficiary pays."

1.4 Principles for developing a new approach

In formulating a framework for Stream 2 eDSM, the Working Group has relied on the following set of guiding principles:

- **Local Need, Local Accountability**: Stream 2 eDSM programs will begin with a clear, evidence-based local need identified by the LDC—whether capacity constraints, reliability concerns, or other challenges. LDCs, with their unique customer relationships and familiarity with local infrastructure, are naturally positioned to lead these efforts.
- **Shared Oversight**: The Working Group's eDSM policy proposal leverages each party's strengths—LDCs, the IESO, and the OEB—through well-defined roles. The IESO's cost-effectiveness expertise and evaluation, measurement and verification capabilities are integral to an LDC-led process, while the OEB provides regulatory oversight towards prudent use of distribution funding.
- **Proportional Cost Allocation**: Costs must follow benefits proportionately. This ensures equitable rate impacts and fosters an environment where local solutions can properly account for the additional value created for the bulk system, warranting funding through the GA in addition to local rates.
- **Reliance on Existing Constructs**: The Working Group has drawn from the OEB's BCA Framework, the IESO's Measures and Assumptions List (MAL), and established province-wide programs and evaluation expertise. By leveraging known measures—such as those validated in previous pilot programs or used successfully in other jurisdictions—LDCs can reduce uncertainties around program performance and cost-effectiveness. Similarly, augmenting existing province-wide programs (e.g., adding local incentives or tailored marketing) lets LDCs tap into established delivery channels and proven strategies, further mitigating the risk of not achieving expected outcomes.

Streamlined Regulatory Pathway: The Working Group proposes a streamlined approvals process to enable shared distribution-rate and GA eDSM funding. This approach centers on IESO confirmation of expected program efficacy, cost-effectiveness and non-duplication, followed by expedited OEB review and approval of distribution funding; typically, within an LDC's annual Incentive Rate-setting Mechanism (IRM), Annual Update process, or Cost of Service application.

- **Transparent Life-Cycle Reporting**: Robust annual and close-out reporting to both the OEB and the IESO ensures appropriate oversight and accountability. In addition, embedding this principle into Stream 2 eDSM provides an evidentiary basis for refining program parameters in response to evolving market conditions or new policy objectives.

2 Policy Proposal for LDC-Led Stream 2 eDSM Process

The framework proposed in this Report is designed to produce a durable evidentiary record, thereby supporting prudence in cost recovery. By leveraging the IESO's technical review and the OEB's streamlined approval approach established via the requested Consultation, LDC eDSM program funding requests can be processed under Delegated Authority where appropriate—minimizing the need for an OEB Commissioner adjudicated proceeding. In parallel, the avoided cost assumptions for cost-effectiveness testing in Stream 2 will remain coordinated with the OEB's ongoing Phase 2 BCA framework work. Should any differences in assumptions arise, the Stream 2 program funding request will document and justify why they are necessary, ensuring alignment or transparency with the broader BCA framework updates.

The following section outlines the proposed process for local, LDC-led eDSM initiatives under Stream 2, which integrates the technical expertise of the IESO with the regulatory oversight of the OEB. This model has been developed jointly by the Working Group, and emphasizes the need for local flexibility, proportionate cost allocation, and minimized administrative complexity.

The Stream 2 framework draws on the proven strengths of prior LDC-led eDSM programs, while introducing a co-funding mechanism that aligns with distribution and bulk system benefits. By leveraging existing NWS Guidelines, as well as the OEB's BCA Framework, Stream 2 aims to offer a clear, step-by-step approach to identifying local system needs, designing effective eDSM interventions, securing regulatory approval for distribution funding in a streamlined, cost-effective, and predictable manner, and obtaining GA-based contributions from the IESO.

2.1 Governance & Structure

The governance and structural framework of Stream 2 balances local autonomy in program conception and delivery with centralized oversight for cost-effectiveness and resource allocation. This structure reflects a collaborative model whereby each entity—LDCs, IESO, and OEB—exercises a clearly-delineated role in program development and oversight, operating within their existing jurisdictions and leveraging the strengths of each party.

2.1.1 Roles & Responsibilities

Local Distribution Companies (LDCs)

- **Identify Distribution Needs**: LDCs are responsible for assessing their local grid challenges—such as capacity constraints or reliability concerns—and determining where targeted eDSM solutions may offer cost-effective alternatives to traditional infrastructure investments.
- **Design & Propose Programs**: Drawing on local system insights and customer relationships, LDCs develop Stream 2 program funding requests that can address the local need. These program funding requests include detailed budgets, cost-benefit projections, and explanation of how the initiative complements and is non-duplicative of existing IESO province-wide offerings. These program funding requests are submitted to the IESO for confirmation of assumptions and methodology.
- **Secure OEB Approval**: LDCs submit applications for distribution funding via their IRM, Annual Update filings, or Cost of Service application. These applications include documentation of the IESO's review and confirmation that expected savings and cost effectiveness have been calculated in accordance with IESO practice, benefit and cost allocation analyses, as well as the proposed eDSM rate riders.
- **Execute & Report**: Following OEB approval, LDCs implement the program, track costs and benefits, and report progress annually. They also submit final close-out information to both the OEB and the IESO, facilitating transparent evaluation and variance disposition.

Independent Electricity System Operator (IESO)

- **Technical Validation**: The IESO maintains the Measures and Assumptions List (MAL) and supply-side avoided cost data for consistent cost-effectiveness testing under the OEB's BCA Framework. The IESO will continue to coordinate these avoided cost assumptions with the OEB's ongoing Phase 2 BCA initiative, ensuring

that Stream 2 methodologies remain aligned or, if needed, provide clear justification for deviations.

- **Validation & Funding**: Before an LDC files with the OEB, the IESO reviews the Stream 2 program funding requests, and confirms savings assumptions, non-duplication of province-wide programs, and the accuracy of benefit-cost ratios (Energy System Test and Distribution Service Test). Upon the OEB's approval of distribution cost recovery, the IESO provides the bulk-system portion of funding through the GA through a contribution agreement with the LDC.
- **Evaluation & Oversight:** Through annual Evaluation, Measurement, and Verification (EM&V), the IESO verifies actual savings achieved by Stream 2 programs, comparing measured results to the original estimates. These findings will be published and provide the OEB and LDC's with results relating to eDSM program performance.

Ontario Energy Board (OEB)

- **Consultation Process**: The OEB initiates a Consultation that allows for it to review the proposed Working Group eDSM process.
- **Streamlined Regulatory Review**: The OEB amends its NWS Guidelines to accommodate Stream 2 program funding requests under IRM, Annual Update processes, or Cost of Service application. This streamlined approach leverages the IESO's confirmation to establish cost-effectiveness and non-duplication, enabling Delegated Authority reviews for routine cases. During this review, the LDC will respond to OEB Staff information requests related to its Stream 2 program and supporting documentation.
- **Rate Approval & Variance Accounting**: The OEB grants final approval of program budget and distribution funding, authorizes new or updated eDSM rate riders, and oversees the eDSM Variance Account (eDSMVA) for tracking any revenue and cost variances. The LDC remains the primary respondent to any information requests regarding the program details requested by OEB Staff as part of its review of the eDSM program funding request.
- **Consumer Protection**: Throughout each application review, the OEB ensures that rate impacts are appropriate, and that cost allocation between distribution customers and the broader provincial system is appropriate.

2.1.2 Application of the Benefit Cost Effectiveness Test

To build on existing policies and efforts, the Stream 2 framework will rely on the OEB's BCA Framework for the purpose of cost-effectiveness testing. The IESO will be responsible for

creating a centralized cost-effectiveness testing tool which incorporates the BCA Framework policies, and LDCs will be responsible for completing it as part of submissions to the IESO and OEB. The Energy System Test, inclusive of a Distribution Service Test, forms the cornerstone of this analytical approach:

1. **Energy System Test (EST)**
    - **Comprehensive System View**: The EST captures both distribution and bulk-level benefits. A program's overall benefit-cost ratio (BCR) must exceed 1.0 for it to qualify for co-funding. Stream 2 applicants may consider whether a buffer beyond 1.0 is warranted to ensure robust net benefits.
    - **Standard Inputs**: To ensure consistency, LDCs rely on the IESO's MAL and supply-side avoided cost assumptions. These inputs reflect the most up-to-date evaluations of measure lifetime, annual energy and capacity savings, and capacity and energy-related benefits.

2. **Distribution Service Test (DST)**
    - **Local Focus**: The DST isolates distribution-level benefits (e.g., deferred or avoided infrastructure costs) and compares them against the portion of the program's costs allocated to local ratepayers.
    - **Minimum Threshold**: Although a BCR of >1.0 is generally expected, LDCs may still seek OEB approval if the BCR (prior to consideration of qualitative benefits) falls between 0.7 and 1.0, provided there is a clear and substantiated qualitative rationale (e.g., improved reliability or operational flexibility). In this circumstance, a notional benefit will be assigned that brings the BCR up to 1.0.
        - **Justification for 0.7**: This threshold recognizes that certain qualitative or longer-term reliability benefits may not be fully captured by quantitative cost-effectiveness metrics. It also aligns with the notion that a small shortfall in direct distribution-level benefits may be offset by broader system or reliability gains.
    - **No Cross-Subsidy**: Where the LDC is substantially relying on qualitative benefits at the local level, the LDC may assign a notional benefit to the distribution level. By assigning these benefits in the BCA, commensurate costs will also be allocated to distribution funding; thereby preventing bulk system customers from unduly subsidizing local ratepayers. **Exception for Low-Income and First Nations Programs:** In line with IESO's eDSM program principles, Stream 2 initiatives primarily targeting low-income and First Nations, may proceed based on a lower EST and DST threshold.

2.1.3 Benefits & Costs

Allocation of Benefits

Under Stream 2, program benefits are categorized as either distribution or bulk system benefits, reflecting their respective impacts on grid capacity, reliability, avoided system costs, or other outcomes eligible for recognition in the BCA. Distribution benefits (e.g., deferral of infrastructure investments, local reliability improvements) are credited to the LDC's distribution system, whereas broader system benefits (e.g., reduced peak demand at the provincial level) are attributed to the bulk system.

Allocation of Costs

To mirror this bifurcation of benefits, program costs are shared according to the ratio of benefits:

> **Distribution Costs**: Proportional to the share of benefits that accrue locally and subject to OEB approval for recovery through distribution rates.
>
> **Bulk System Costs**: Proportional to the share of benefits realized at the bulk system level (i.e. all non-distribution benefits), funded through the GA.

As noted above, under some circumstances a notional value of qualitative benefits may be added to the distribution benefits. This effectively means the distribution side carries additional cost responsibility to ensure that the GA funding remains aligned with the actual bulk-system benefits. This adjustment mechanism ensures that bulk system costs remain commensurate with bulk system benefits, preventing cross-subsidy from the GA.

2.1.4 Global Adjustment Funding

Under the Stream 2 eDSM framework proposed in this Report, the IESO will deploy GA funds to cover the portion of eDSM costs allocated to the bulk system. Funding will be subject to the following parameters:

> **Standard Contribution Agreement**: Following OEB approval of the LDC's application for distribution funding, the IESO and the LDC will execute a standardized contribution agreement that stipulates funding amounts, payment schedules, and reporting obligations.
>
> **Centralized Administration**: The IESO may align disbursement schedules with existing settlement processes, ensuring administrative simplicity and consistency.

EM&V Linkages: Continued GA funding is subject to the LDC fulfilling reporting and data provision requirements. The IESO's annual and final evaluations will determine whether the realized bulk system benefits align with the anticipated outcomes.

Availability of funds: The IESO will maintain a combined budget of at least $90 million and no more than $150 million[2] for LDC participation of eDSM programs (Streams 1 and 2), consistent with the Minister's direction and multi-year planning cycles. This ensures that Stream 2 GA expenditures remain within the provincially established eDSM envelope.

2.1.5 Distribution Rate Funding

The portion of Stream 2 program costs attributable to the distribution system is recovered through LDC rates, via a streamlined regulatory approach:

- **eDSM Rate Riders**: LDCs include proposed eDSM rate riders in their applications, derived from the projected distribution portion of the Stream 2 budget (as confirmed by the IESO). Each LDC filing also presents rate impacts, illustrating the incremental bill effect if the program is approved. These applications can seek approval for either a one-year or a multi-year eDSM program. In each case, the eDSM rate riders would reflect the forecasted costs over the entire approved term, subject to variance tracking and annual reporting.
- **eDSM Variance Account (eDSMVA)**: if approved, the OEB will authorize a variance account to track the difference between actual and forecasted distribution costs, as well as any difference in revenues from eDSM rate riders. This mechanism applies for both single-year and multi-year programs.
- **Utility Incentive**: LDCs may embed a performance-based incentive in their Stream 2 budgets, remunerating the distributor for meeting or exceeding program objectives. This incentive is considered a program cost and, consistent with the beneficiary-pays principle, is allocated between GA and distribution rates in proportion to their share of overall program benefits.
    - **Basis for Incentive:** The Stream 2 eDSM program framework allows an incentive mechanism that can be designed based on any of the three prescribed frameworks identified by the OEB in its Framework on Energy Innovation. (i.e., Margin on Payments, Shared Savings Mechanism or Scorecard)

[2] https://www.ieso.ca/-/media/Files/IESO/Document-Library/corporate/ministerial-directives/Directive-from-the-Minister-of-Energy-and-Electrification-20241107-eDSM.pdf, page 9, section H. 3. (c).

- An illustrative example of an LDC incentive has been included in Appendix A

- **Regulatory Approval**: The OEB reviews each Stream 2 application, including the correctness of cost-allocation calculations per the IESO Confirmation Letter, and validates proposed eDSM rate riders. Both single-year and multi-year approvals follow this streamlined process, with annual reporting to the IESO used to monitor progress and variances.

2.1.6 LDC Collaboration

In addition to addressing local distribution needs, multiple LDCs may find it beneficial to collaborate on a joint eDSM program for the purpose of addressing common regional system needs. A joint eDSM program implemented by two or more LDCs is expected to adhere to the following:

- **Joint Program Design**: Collaborating LDCs are encouraged to develop a unified program that can be scaled across contiguous service areas, leveraging shared resources and customer engagement strategies to optimize outcomes.
- **IESO Coordination**: The IESO may assess the program on a combined basis but will issue separate Confirmation Letters and subsequent contribution agreements reflecting the cost allocation specific to each LDC.
- **Individual Applications to the OEB**: Each LDC must prepare and submit its own eDSM funding application. Where multiple LDCs collaborate on a joint program, each LDC will identify and justify the forecast rate impact for its respective service area.
- **Common Reporting & EM&V**: While each LDC remains responsible for tracking its own costs and benefits, the IESO can, at its discretion, consolidate evaluation activities and public reporting to reflect the regional impact of the program.

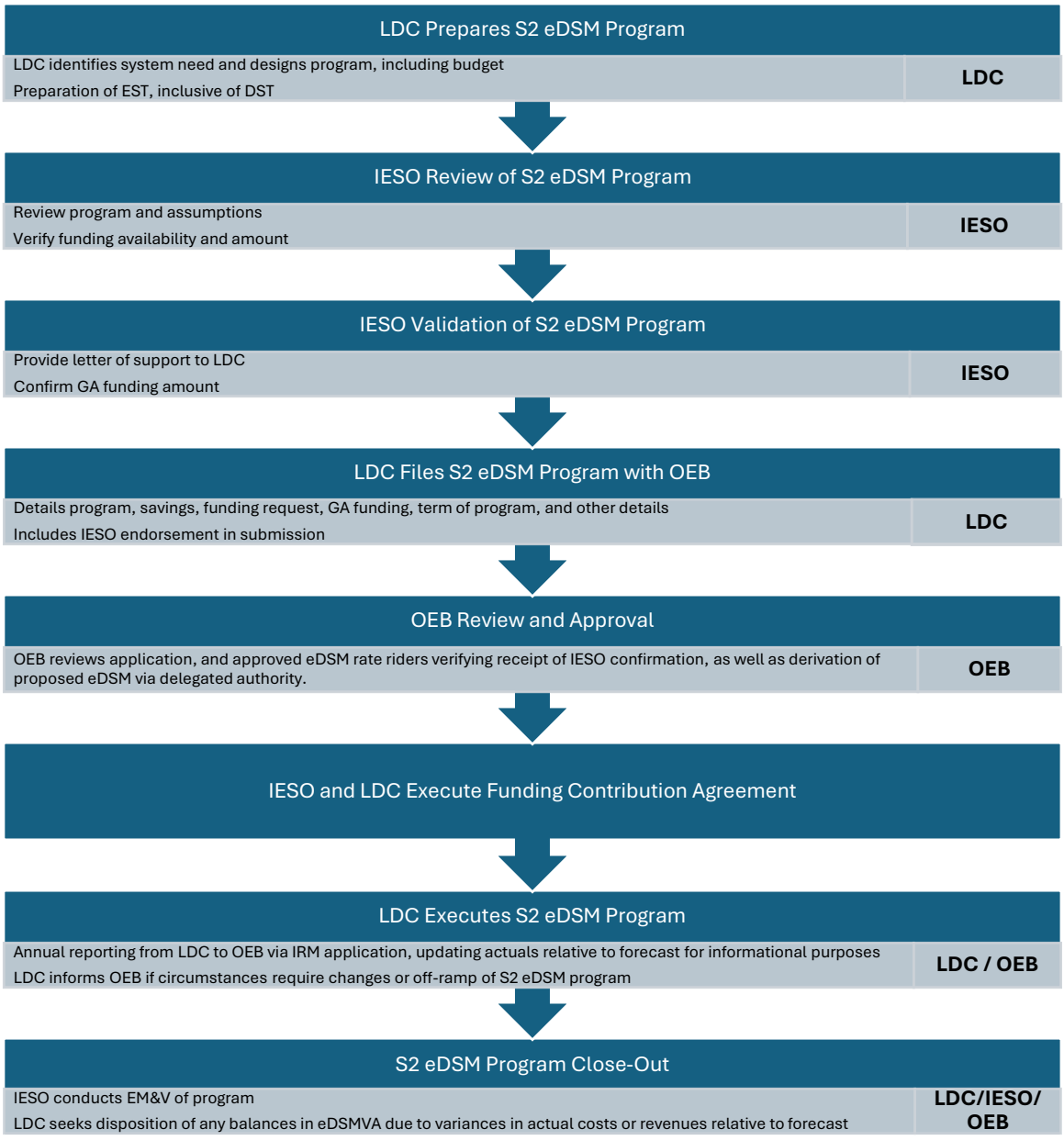
2.2 Process

Stream 2 eDSM is designed as a structured, step-by-step framework which can be applied in a consistent and replicable manner, without the creation of undue incremental processes. The subsections that follow outline each phase of a Stream 2 eDSM program, from initial conceptualization to final close-out.

2.2.1 Overview of Process

The Stream 2 eDSM life cycle can be segmented into the major stages shown in Figure 1 below:

Figure 1 Stream 2 eDSM Process Flow



The following sections describe each of the above steps in detail.

2.2.2 LDC Prepares Stream 2 eDSM Program

Identification of Distribution Need

An LDC commences the Stream 2 process by identifying a specific need within its distribution system that could be met, in whole or in part, by targeted eDSM measures. Commonly cited needs are anticipated to include capacity constraints in rapidly growing

areas, reliability enhancements, and load-balancing requirements. These needs are substantiated through publicly available sources, such as Distribution System Plans (DSPs), capacity maps, or regional planning documents. However, if the LDC intends to demonstrate cost-effectiveness by deferring a specific infrastructure project not clearly documented in public materials then it must be prepared to provide supplemental evidence in its application.

Program Design & Cost-Effectiveness Analysis

Upon determining that eDSM may address the identified distribution need, the LDC proceeds to design a Stream 2 eDSM program. The design may involve:

- **Augmenting Existing Province-Wide Programs** with additional incentives and/or specialized/targeted marketing efforts targeting local participants.
- **Leveraging Known Measures** from the IESO's MAL, validated pilot programs, or evaluated initiatives from analogous jurisdictions.
- **Detailed Calculation of Distribution Benefits**: To enhance clarity for the OEB, the LDC will be required to explain its methodology for determining distribution benefits, using the guidance on distribution service benefits in the OEB's Benefit-Cost Analysis Framework. This includes how the eDSM initiative might avoid or defer infrastructure upgrades, provide reliability improvements, or other localized benefits that are both qualitative and quantitative. The submission might cover:
    - Reference to specific load-growth trends or reliability metrics in the LDC's planning documents.
    - A description of any modeling tools or cost-estimation methods used to calculate localized savings.
    - Listing out key assumptions (e.g., measure lifespans, localized capacity constraints, peak-coincident savings factors).

Following these steps, the LDC prepares preliminary budgets, energy savings forecasts, and projected program participation rates. These data points serve as inputs into the IESO-provided online cost-effectiveness calculator. This tool generates the expected EST and DST results that establish the proposed cost allocation between the bulk and distribution systems. In its subsequent OEB application, the LDC should be ready to produce any project-specific data not found in public filings if OEB Staff or Delegated Authority requests further evidence to support the claimed deferral or reliability benefits.

2.2.3 IESO Review of Stream 2 eDSM Program

Submission & Preliminary Assessment

Following the internal development of a Stream 2 program funding request, the LDC submits its program plan to the IESO. This submission includes:

1. A completed Stream 2 program funding request outlining the program (including the local distribution system need the program addresses), target market, anticipated results, and other technical specifications.
2. Quantitative outputs from the IESO's cost-effectiveness calculator, demonstrating compliance with the EST ≥ 1.0 threshold and alignment with the DST expectations.
3. Evidence that the initiative is non-duplicative of ongoing province-wide or regional eDSM programs and supportive of the eDSM Directive.

Validation of Cost-Effectiveness & Non-Duplication

The IESO examines the submission to confirm that all underlying assumptions—such as measure lives, savings values, and avoided costs—are consistent with established data sources (e.g., MAL, IESO-endorsed supply-side avoided costs). The IESO also confirms that the proposed program is not duplicative of existing province-wide programs, and that the LDC has accurately segmented distribution versus bulk benefits.

Technical Clarifications

The IESO will coordinate with the LDC to refine program assumptions or address data gaps, as necessary. This iterative process may lead to minor adjustments regarding program specific details, such as incentive levels, target customer segments, marketing approaches, or other changes to ensure the program funding request is realistic, accurate, and fully optimized for both local and system-wide objectives.

Budget Validation

As part of its review, the IESO also confirms an overall maximum program budget for which GA funding is being allocated. If the LDC later anticipates exceeding this budget, it must coordinate with the IESO to confirm that additional GA funds are available. Any material change in cost or program scope would then require updated OEB approval, as described in Section 2.2.6.

2.2.4 IESO Confirmation of analysis of Stream 2 eDSM Program

Confirmation Letter

Upon confirming that the proposed Stream 2 eDSM program satisfies the cost-effectiveness criteria, does not replicate existing province-wide initiatives, and is expected

to yield successful results, the IESO issues a standardized Confirmation Letter to the LDC. This letter is expected to include:

- A summary of the confirmed cost-benefit outcomes (i.e., EST, DST).
- Confirmation of the expected distribution versus bulk cost allocation.
- Confirmation that GA funds are available for the bulk-share portion of costs, contingent on OEB approval of distribution funding in rates.
- Additional conditions related to program design, delivery, or reporting, if applicable.
- Explicit mention of the maximum program budget that the IESO will support through GA funding, establishing the upper limit for costs unless the LDC secures subsequent approval for any expansion.

Non-Binding Validation

The IESO confirmation neither guarantees nor replaces OEB approval. Rather, the letter articulates that from the IESO's perspective, the program meets established technical and cost-effectiveness thresholds. This confirmation becomes a critical piece of the LDC's subsequent application to the OEB, providing confidence to the OEB that the program funding request is sound.

2.2.5 LDC Files Stream 2 eDSM Program Application with OEB

Inclusion in IRM, Annual Update, or Cost of Service application

Following IESO confirmation, the LDC incorporates the Stream 2 eDSM program funding request into its next IRM, Annual Update, or Cost of Service application, as applicable. The application is expected to include:

1. A summary of the identified distribution need, referencing publicly available system planning documents (e.g. Distribution System Plan, capacity maps, regional planning documents), and expected distribution benefit.
2. The proposed program design, cost allocation, and estimated budgets; including the allocation of costs and benefits between the bulk and distribution system.
3. The IESO Confirmation Letter, confirming the program's technical viability and cost-effectiveness.
4. A completed Stream 2 eDSM Workform, outlining the forecasted distribution costs and requested rate riders.

Approval Requested

The primary relief sought in the IRM, Annual Update, or Cost of Service is as follows:

- New or updated eDSM rate riders to recover the distribution share of program costs.
- Use of the eDSMVA to track variances between forecasted and actual program expenses and funding collected via eDSM rate riders. (*The OEB may consider whether it is appropriate to establish a generic variance account framework for all LDCs offering Stream 2 eDSM programs)*
- A utility-specific incentive (if applicable), embedded in program costs and proportional to local versus bulk benefits.

2.2.6 OEB Review Process

Symmetric Variance Account (No Materiality Threshold)

When approving the program, the OEB will also confirm that the eDSM Variance Account (eDSMVA) applies with no materiality threshold. This means all differences—whether underspending or overspending relative to the approved distribution budget—are tracked. While the framework permits overspending in principle, it is subject to a prudence review and requires demonstration that additional GA funding is justified, as set out in the IESO Confirmation Letter. Any significant change in the cost forecast that exceeds the validated budget would prompt the LDC to file an updated application that has been confirmed by the IESO, for the OEB's Delegated Authority (or another appropriate review). A full OEB panel review is expected only if the LDC requests a significant budget extension or scope change that deviates from the approved approach. Minor changes or routine annual updates are expected to be determined by an OEB Delegated Authority for streamlined handling, subject to the OEB's final decision on the authorities granted to a Delegated Authority for this purpose.

Delegated Authority & Streamlined Proceedings

The Working Group proposes a streamlined review process for Stream 2 applications under Delegated Authority. Under this approach, OEB staff would evaluate the completeness and correctness of the LDC's filing—verifying the cost-effectiveness tests (EST, DST) and cost-allocation split between distribution rates and the GA, as well as confirming that the distribution need is substantiated. However, whether the OEB ultimately adopts Delegated Authority for all or part of these eDSM funding requests will depend on the outcome of the initial proceeding examining this policy proposal.

That initial proceeding—which may take the form of a generic hearing or a policy consultation—will allow the OEB to determine if and how Delegated Authority could apply for subsequent Stream 2 applications. Participation by the IESO and Working Group leads in that process will be critical to provide evidence, clarify key assumptions, and address

any stakeholder concerns about the scope of delegated approval. Until the OEB issues its decision or policy from that proceeding, the details of how streamlined or Delegated Authority reviews will be conducted remain subject to the OEB's discretion.

Rate Rider Confirmation

Upon approval, the OEB sets new (or adjusted) eDSM rate riders corresponding to approved distribution-related costs. The OEB simultaneously authorizes the LDC to establish (or continue to track entries in) the eDSMVA, allowing for differences between approved budgets and actual expenditures, as well as variances in eDSM rate rider revenues, to be captured.

2.2.7 IESO-LDC Contribution Agreement

Finalize GA Funding & LDC and IESO Execute eDSM Contribution Agreement

The LDC and IESO finalize a standard contribution agreement covering the GA-funded portion of the program costs. This agreement clarifies the maximum program budget, payment schedules, and any reporting obligations tied to receiving GA support.

2.2.8 LDC Executes Stream 2 eDSM Program

With OEB approval in place and a finalized GA funding agreement from the IESO, the LDC proceeds to roll out the Stream 2 eDSM program. As noted above, before commencing its OEB approved eDSM program, the LDC and IESO will execute a contribution agreement funding the GA-funded share of the program. Typical rollout activities include establishing internal processes, finalizing vendor or customer incentives, marketing the program to eligible participants, and coordinating with the IESO on any data collection needs for EM&V.

2.2.9 Annual Reporting & Mid-Course Adjustments

On an annual basis, the LDC provides interim performance data to both the IESO and the OEB, typically incorporated into subsequent IRM, Annual Update, or Cost of Service proceedings. The annual updates provided to the OEB are intended to be informational. Unless the LDC proposes a material program change (which would necessitate IESO confirmation), these updates are not proposed to be substantive enough to require re-opening of the program for OEB review and/or approval.

These updates focus on:

- Actual distribution costs vs. forecast and any associated balance in the eDSMVA.

    - Since the eDSMVA is classified as a Group 2 variance account, the eDSMVA is anticipated to be reviewed and disposed of at the LDC's next Cost-of-Service (COS) application. This ensures the account is subject to a prudence review, consistent with the OEB's standard practice for Group 2 accounts. The streamlined approach outlined here does not preclude an earlier disposition if the LDC chooses to seek one, but under normal circumstances, reconciliation will occur during the COS proceeding.
- Variation in realized energy savings or demand reductions relative to initial projections.
- Justifications for any significant cost or performance variances.
- Proposed mid-course program changes
    - If performance data indicates the program is significantly underperforming, the LDC may propose modifications or potentially discontinue certain elements of the program. Any major adjustment requires a cost-benefit re-evaluation and IESO confirmation, ensuring that the program remains cost-effective. The LDC must also report such decisions in its close-out evidence at the next COS application, allowing the OEB to review the rationale for stopping or scaling back the program and determine prudence for any associated costs.
    - If performance is significantly below target for two consecutive years, the LDC may propose to re-scope the program.
- Variance Tracking & Potential Overspend: if actual or forecast costs begin to exceed the maximum program budget established by the IESO's confirmation letter and OEB approval, the LDC must seek an updated OEB approval. This ensures the variance account remains symmetric (capturing all cost deviations) while preserving the beneficiary-pays principle (including proportional GA funding for any approved increase)

IESO will undertake annual EM&V to verify outcomes. It will also report aggregated Stream 2 results to the Ministry under its existing obligations. Feedback from annual reporting and EM&V can inform programmatic adjustments, ensuring that Stream 2 programs remain effective and cost-conscious.

2.2.10 Stream 2 eDSM Program Close-Out

Final EM&V

At close-out, the LDC provides a comprehensive summary of the Stream 2 eDSM program's performance, including qualitative measures such as improvements to local reliability or

capacity headroom. This final documentation, submitted to the OEB, supports a prudence review by detailing whether actual costs and outcomes align with the approved forecasts.

Following the designated end of the program, the IESO undertakes a final EM&V process. While annual EM&V of Stream 2 programs is primarily outcome-focused, the final EM&V may also incorporate a process evaluation—particularly valuable for longer multi-year programs, as it can identify best practices and areas for improvement that might be relevant to future initiatives. However, it is anticipated that no formal mid-term re-adjudication at the OEB is mandated; any mid-course revisions remain at the LDC's discretion.

Incentive Tied to Verified Results

Where a performance-based incentive is embedded in the Stream 2 budget, the final EM&V results are expected to serve as the basis for calculating the LDC's ultimate entitlement. If the incentive is proportional to forecasted savings over the entire program term, the verified savings (or related metrics) may adjust the final incentive warranted. This approach ensures that ratepayer-funded incentives reflect actual benefits delivered, whether they be local or bulk-system related.

Variance Disposition

In the LDC's next available rebasing proceeding, the LDC will request disposition of any remaining balance in the eDSMVA. The filing is expected to include:

- A final Stream 2 eDSM Workform, reflecting all actual costs and benefits, as well as actual eDSM rate rider revenues collected.
- A variance analysis explaining discrepancies between forecast and realized outcomes.
- Lessons learned and potential recommendations for future program enhancements.

2.3 Requests of the OEB

The Working Group is seeking the OEB's collaboration and support in initiating a Consultation that will finalize the guidelines for implementing a streamlined framework for Stream 2 eDSM. This framework requires specific regulatory accommodations to ensure efficient processes and fair cost recovery. The subsections below articulate two primary requests of the OEB.

2.3.1 Establish a Streamlined Approach for Approval of Distribution Funding

The first and most critical request is for the OEB to adopt a streamlined approval process that allows for the timely review of LDC applications for distribution funding of Stream 2 eDSM programs. Although the existing NWS Guidelines permit distribution funding for local eDSM initiatives, these guidelines and associated filing requirements were not designed with a co-funded Stream 2 model in mind, nor did they contemplate leveraging the expertise of the IESO for review and confirmation of program funding requests. By implementing a more streamlined approach—particularly in the context of routine IRM or Annual Update filings—the OEB would facilitate timely decisions while preserving the core elements for due diligence.

The request for a streamlined approval process was referenced in the December 19, 2024, LoD to the OEB as noted in the following:

> "*Propose an appropriate cost-sharing mechanism, involving the Global Adjustment and distribution rates, grounded on the principle of beneficiary pays, to fund the development and operation of new energy efficiency programs that provide both system and local distribution benefits*,"
>
> - And –
>
> "*Reduce barriers to LDC energy efficiency program activities by taking actions such as updating its Non-Wires Solutions Guidelines for Electricity Distributors or otherwise acting to support such programs.*"

These directions complement the earlier 2023 LoD and collectively emphasize that the OEB should update its regulatory processes to facilitate streamlined approval of local eDSM initiatives, consistent with the principle of beneficiary pays model described in this Report.

Under the proposed streamlined mechanism, the IESO acts as the primary reviewer of program design, benefit and cost allocation, and non-duplication criteria, consistent with the new eDSM Directive. Once a program receives IESO confirmation, the OEB can rely on the IESO's technical eDSM expertise and limit its review to 1) verifying reasonable cost impacts to local ratepayers and alignment with government direction, and 2) confirming consistency with fundamental rate-setting principles.

By leveraging the IESO's domain of expertise, the OEB could streamline its Stream 2 eDSM review and approvals. The approach described in this Report lowers regulatory costs while ensuring adequate pre- and in-flight program oversight.

Amendments to OEB Policy & Filing Requirements

To realize this streamlined approach, the Working Group expects the OEB will need to amend certain policy documents and filing requirements, including:

- **Revisions to the NWS Guidelines** to formally incorporate Stream 2 provisions, clarifying expectations around cost-effectiveness thresholds, the establishment and use of eDSM rate riders, the use of the eDSMVA, and the streamlined process for Stream 2 funding requests.
- **Updates to the Chapter 3 Filing Requirements** for IRM applications to incorporate Stream 2 provisions and align with amended NWS Guidelines.

2.3.2 Stream 2 eDSM Workform

The second request concerns the development and issuance of a standardized Stream 2 eDSM Workform. This Excel-based tool would serve as a unified template for presenting and analyzing relevant program data, ensuring consistency across LDC applications and supporting the OEB's delegated review process.

Purpose & Design

By consolidating forecasted costs, expected benefits, and eDSM rate rider calculations into a single format, the Workform reduces administrative burden and promotes regulatory efficiency.

Given the dual focus of Stream 2 on both distribution and bulk system benefits, the Stream 2 eDSM Workform should:

- **Incorporate** fields and formulas for EST and DST calculations
- **Auto-populate** IESO's standardized inputs (e.g., MAL, Avoided Supply-Side Costs)
- **Provide** the capability to enter qualitative data—such as reliability benefits or operational flexibility—in a structured manner, allowing the OEB to track instances where programs rely partly on qualitative justifications (e.g., DST BCR < 1.0).

Life-Cycle Approach & Annual Updates

Beyond supporting initial filings, the Workform would be updated annually to report actual costs, revenues, and measured benefits. Over the program's life cycle, this iterative data submission ensures that both the OEB and the IESO have accurate and transparent information, simplifying variance analyses and ultimate disposition of any outstanding eDSMVA balances.

Benefits of the Workform:

1. Standardization across LDCs for immediate comparability,
2. Reduced regulatory burden through consistent documentation,
3. Improved visibility into cost allocations and realized savings,
4. Enhanced accountability for both LDCs and the IESO, reinforcing the principle of beneficiary pays.

By implementing a streamlined approval mechanism under updated NWS Guidelines (as called for by both the 2023 and 2024 Letters of Direction) and adopting a standardized Stream 2 eDSM Workform, the OEB will significantly reduce barriers to LDC-led eDSM activities. This facilitates the beneficiary-pays cost-sharing model envisioned by the Minister, enabling robust, cost-effective local eDSM programs that support Ontario's evolving energy needs.

2.4 Requests of the IESO for this Proceeding

Drawing on its expertise in program design, measures and assumptions, and impact evaluation, the IESO is requested to deliver a suite of tools and standardized forms that streamline program review, cost-effectiveness analysis, funding arrangements, and reporting. The sections below detail five specific requests necessary for implementing Stream 2 eDSM efficiently and transparently.

2.4.1 Online Calculator

The first request pertains to the development and maintenance of an online calculator, allowing LDCs to perform both the EST and the DST. This platform should integrate the IESO's MAL and updated supply-side avoided cost data, ensuring consistent and verifiable cost-effectiveness outputs across all proposed Stream 2 programs. The online calculator is anticipated to have the following characteristics:

Standardized Data Inputs: The calculator should prompt LDCs to enter projected program costs (e.g., incentives, administration), participation rates, and additional distribution-specific parameters (e.g., avoided infrastructure costs). To the greatest extent possible, the online calculator is expected to rely on a common set of IESO-provided inputs.

EST and DST Outputs: Once inputs are submitted, the tool must generate clear, standardized outputs (e.g., benefit-cost ratio values) which include critical data points to the LDC's subsequent application to the OEB, such as cost allocation between the bulk and distribution systems.

Periodic Updates: To accommodate changing market conditions or updates to the MAL or supply costs, the IESO is expected to periodically refresh the calculator's underlying data and formulas, communicating such changes to all LDCs and the OEB as applicable.

2.4.2 Stream 2 Program Funding Request Form

The second request is for a standardized Stream 2 program funding request form that LDCs will use when submitting Stream 2 programs to the IESO for review. This form should systematically capture all essential program information, including, but not limited to:

- **Program Overview**: Objectives, target customer segments, and a summary that describes the distribution need addressed.
- **Cost-Effectiveness Summary**: EST and DST results from the online calculator, along with relevant input assumptions.
- **Program Rationale**: Explanation of if and how the proposed program complements existing province-wide eDSM initiatives.
- **Proposed Cost Allocation**: Explicit delineation of distribution versus bulk costs, reflecting the proportion of benefits attributable to each system level.

By using this standardized format, the IESO can more efficiently compare and evaluate program funding requests, reducing administrative complexities and improving overall transparency.

2.4.3 Confirmation Letter

The IESO is also requested to create a standardized Confirmation Letter, which will serve as official confirmation that a proposed Stream 2 eDSM program is cost-effective, non-duplicative, and anticipated to be successful. Key elements the Confirmation Letter are expected to be:

- **Program Summary:** A concise restatement of the proposed program.
- **Cost Effectiveness and Cost Allocation**: Statement of the EST and DST results, as well as the distribution vs. bulk cost allocation.
- **Confirmation of GA Funding**: Assurance that the IESO stands ready to provide GA-based contributions contingent on OEB-approval of distribution rate funding.

2.4.4 Annual Reporting Form

The fourth request concerns the provision of an annual reporting form, which LDCs would use to submit annual updates on their Stream 2 eDSM program results. This form should

align closely with the data fields in the Stream 2 Program Funding Request Form and the final Stream 2 eDSM Workform used for OEB filings. Features are expected to include:

- **Actual Costs vs. Forecast Cost**: A breakdown of actual expenditures against the approved budget, itemized by incentives, program administration, marketing, and other categories as applicable.
- **Program Results**: A comparison of realized outcomes to initial projections, measured through metrics agreed upon in the Confirmation Letter.
- **Qualitative Insights**: Brief commentary on any operational challenges, lessons learned, or emerging market conditions that may influence future program performance.

Support for EM&V and Monitoring

In addition to informing the OEB, the annual reporting form enables the IESO to conduct its EM&V activities and oversee program monitoring. By collecting consistent, year-over-year data, the IESO can verify savings and identify any issues that require mid-course adjustments. However, the OEB will not typically re-open an approved Stream 2 program based on these yearly updates alone.

No Re-Opener Except for Joint Program Funding Requests

Unless the LDC proposes a material program change or early closure (e.g., significantly exceeding the approved budget or fundamentally altering the scope), the LDC is expected to proceed under its existing approval. Should such a significant revision be necessary, the LDC would file an updated application to obtain OEB approval for the change. Otherwise, the program will continue through the approved term without formal re-adjudication.

2.4.5 Close-Out Form

Finally, the IESO is requested to develop a standardized close-out form. Upon completion of the Stream 2 eDSM program, LDCs will compile all relevant performance and outcome data into this single document, which will be relied upon by the IESO for final EM&V efforts. The close-out form is expected to include:

1. **Final Costs and Benefits**: A reconciliation of forecasted versus actual program costs, with the final EST and DST values reflecting verified energy savings and demand reductions.
2. **Detailed Supporting Data:** Provision of all underlying data and calculations required for the IESO to complete comprehensive EM&V.

3. **Variance Analysis**: Explanation for any major deviations in budget, participation, or savings outcomes.
4. **Lessons Learned**: High-level commentary on program design efficacy, participant engagement, and potential improvements for future deployments.

2.4.6 Standard contribution agreement

The IESO will develop a standard agreement to outline the terms and conditions of funding from the GA.

2.4.7 Program EM&V

Finally, the IESO is requested to conduct or coordinate independent EM&V for each approved Stream 2 eDSM program. This responsibility expands upon the IESO's existing evaluation role, ensuring that Stream 2 programs are rigorously assessed for:

1. **Energy and Demand Savings:** Verification of reported energy (kWh) and peak demand (kW) reductions achieved by the program, aligning with provincial standards.

2. **Cost-Effectiveness**: Confirmation of the program's realized cost-effectiveness compared to initial forecasts (EST, DST, and qualitative benefits). EM&V findings help determine whether the program's actual performance justifies the investments made, both in local rates and GA funding.

3. **Optional Mid-Stream Process Evaluation**: For multi-year programs, the IESO may conduct an optional process evaluation partway through implementation to identify potential improvements. However, no formal OEB re-adjudication is proposed mid-program—this evaluation is informational, supporting the LDC's decision-making and potential minor adjustments to facilitate continuous improvement.

4. **Incentive Payout Alignment:** If a performance-based incentive is tied to final EM&V results (e.g., verified net savings), the IESO's evaluation will inform the LDC's ultimate incentive, ensuring that any ratepayer-funded incentive reflects actual benefits delivered.

5. **Transparent Reporting:** Annual and final EM&V results should be shared publicly, at least in aggregated form, to inform the OEB, LDCs, and other stakeholders about each Stream 2 program's performance. These outcomes also feed into the close-out evidence that facilitate the prudence review at the LDC's next Cost of Service (COS) and may inform subsequent policy decisions around eDSM.

By explicitly requesting program-level EM&V from the IESO, the framework ensures that each Stream 2 initiative is evaluated with rigor and transparency and the IESO's established expertise in program evaluation.

3 Conclusions

The development of jointly funded Stream 2 eDSM programs marks a pivotal evolution in Ontario's efforts to meet both local distribution needs and broader system objectives. By combining the expertise, resources, and mandates of LDCs, the IESO, and the OEB, the proposed framework addresses key challenges in the current regulatory landscape in a manner that is highly responsive to the 2023 LoD, 2024 LoD, and 2024 Directive.

The Working Group respectfully requests that the OEB:

1. Initiate a consultation to revise the NWS Guidelines and develop a Stream 2 eDSM program funding as set out in this Report; and,
2. Develop an eDSM Workform that supports its ability to approve LDC eDSM applications as part of the IRM, Annual Update process, or Cost of Service application led by Delegated Authority.

Concurrently, the IESO can begin to prepare the series of tools outlined above to facilitate an efficient and effective roll out of Stream 2 eDSM. Implementing Stream 2 eDSM represents a collective effort that will involve LDCs, the IESO, the OEB, and other key stakeholders. The success of this framework hinges on continuous engagement, data-driven refinements, and the flexibility to adapt to evolving system conditions. As a collaborative approach, Stream 2 will serve as an enduring component of Ontario's electricity sector- enhancing reliability, reducing costs, and contributing to the province's broader energy eDSM and environmental objectives. By leveraging LDCs' close customer relationships and local infrastructure insights, Stream 2 enables tailored, customer-centric solutions that address distribution constraints and offer ratepayers additional options for energy efficiency—ultimately benefiting both local grids and the provincial electricity system.

In closing, the Working Group commends the OEB and Ministry for recognizing the importance of locally driven, broadly beneficial demand side management solutions. The Working Group looks forward to continued collaboration in finalizing, implementing, and optimizing a Stream 2 eDSM framework for the benefit of Ontario's local electricity ratepayers and the provincial grid, as well as support the province's wider environmental objectives.

APPENDIX A: Illustration of eDSM Process

Context for LDC-IESO Working Group Illustration of eDSM Process

This Appendix has been prepared to provide an illustration of the implementation of the Independent Electricity System Operator (IESO) - Local Distribution Company (LDC) Working Group's proposed process and framework for Stream 2 eDSM, jointly funded by the Global Adjustment (GA) and local distribution rates. The Appendix walks through each step of the proposed process using an example scenario.

3.1 Program Background

The illustrative LDC's service area features three transformer stations (TS) supplied by two 230 kV circuits. The most recent Integrated Regional Resource Plan (IRRP) prepared by the IESO has identified long-term infrastructure challenges through 2043. Specifically, the 2025 IRRP identifies the need for a new TS serving the LDC in as little as 3 years (i.e. 2028). The IRRP also recommends exploration of a non-wires' solution ("NWS")—in lieu of or in concert with traditional infrastructure—to delay capital expansion.

3.2 LDC Prepares Program

On the basis of local planning intelligence and the IRRP from the IESO, the LDC identifies there is a system need to alleviate capacity constraints within its service territory. In assessing available options to meet the identified system need, the LDC evaluates the potential for a NWS, determining that the most cost-effective available NWS is a Local Retrofit Program under Stream 2 eDSM with the following basic parameters ("the Program"):

- **Enhanced Incentives:** The program offers an incremental $1,200/kW for non-lighting measures, building on the standard (Stream 1) provincial Retrofit measures.
- **Targeted Outreach:** Three full-time resources—an Energy Manager (EM), a Program Officer (PO), and a Sales Support Agent—devote themselves to identifying, evaluating, and implementing projects. This approach ensures higher participation rates than a generic, province-wide offering.
- **Coordination with IESO:** The LDC assess current-provincial eDSM offerings and works with the IESO's Measures and Assumptions List (MAL) to avoid duplicative efforts and confirm measure savings assumptions.

The LDC first assesses whether the Program can successfully address the capacity constraint need identified. After developing forecasts for program uptake based on the initial design of the Program, the LDC concludes that the Program can deliver 10MW of capacity savings, which would successfully defer the need for a new TS from a required date of 2028 to an in-service date of 2033. The LDC plans for the Program to run for a period of 5 years, from 2025 through 2029, generating kW and kWh savings which are forecast to persist for an average of 15 years from implementation.

To assess the cost-effectiveness of the NWS relative to a traditional capital infrastructure solution, the LDC completes a Benefit-Cost Analysis (BCA) utilizing the IESO's online cost-effectiveness calculator, which relies on the OEB's BCA framework to generate Energy System Test (EST) and Distribution Service Test (DST) results. To complete this, the LDC must first determine total distribution benefits and upstream energy system benefits, respectively, as the relative quantum of each will determine the allocation of program costs as between the GA and distribution rates.

Distribution benefits are determined on the basis of the avoided costs of deferred capacity, using the Cost-of-Service approach outlined in section 5.1.1.1 of the BCA Framework. The LDC assess the comparative Net Present Value (NPV) cost to ratepayers of constructing the TS in 2033 as opposed to 2028. The TS is forecast to require capital expenditures of $40 million. Relying on the methodologies outlined in the BCA Framework, the LDC determines deferral of the asset for a period of 5 years would result in Distribution Service Benefits of $9.5 million, as shown below:

Table 1: Distribution Service Benefits

	NPV of Costs ($millions)
Base Case	37.06
NWS Case	27.59
NPV Benefit	**9.47**

Upstream Energy System benefits are established on the basis of the IESO's supply-side avoided costs included in the IESO's cost-effectiveness calculator. Utilizing these assumptions, the LDC determines over a 5-year period the Program will yield $17.9 million in capacity avoided costs, and $1.9 million in avoided energy costs on an NPV basis, as shown below:

Table 2: Energy System Benefits

	NPV of Avoided Costs ($millions)
Capacity Avoided Costs	17.91
Energy Avoided Costs	1.89
Total Avoided Costs	**19.80**

As shown below, in total the Program is forecast to yield benefits of $29.3 million on an NPV basis. The relative proportion of upstream Energy System and Distribution Service benefits will be used to determine cost allocators for the GA and distribution rate portions of funding. In this manner, Stream 2 eDSM will maintain the principle of beneficiary pays.

Table 3: Proportion of Benefits

	NPV of Benefits ($millions)	Proportion of Benefits
Distribution Service Benefits	9.47	32%
Energy System Benefits	19.80	68%
Total Avoided Costs	**29.27**	**100%**

To prepare an implementation plan and inform cost-effectiveness testing, the LDC must prepare a budget (including, but not limited to, incentives, program administration, evaluation, and a utility incentive). The LDC has determined the following budget is required over a 5-year period to secure the planned 10MW of capacity savings:

Table 4: Program Budget

Item ($millions)	2025	2026	2027	2028	2029	Total
Incentive Costs	2.00	2.00	2.00	2.00	2.00	**10.00**
Admin Costs	0.75	0.75	0.75	0.75	0.75	**3.75**
Marketing & External Costs	0.20	0.20	0.20	0.20	0.20	**1.00**
Evaluation Costs	0.10	0.10	0.10	0.10	0.10	**0.50**
Utility Incentive	0.59	0.59	0.59	0.59	0.59	**2.96**
Total	**3.64**	**3.64**	**3.64**	**3.64**	**3.64**	**18.21**

Having established a budget for the Program, the LDC can input these cost parameters into the IESO's cost-effectiveness calculator to determine DST and EST results. As part of this

process, the proportionate benefits between the bulk system and distribution system are used to allocate the budget between the GA and distribution rates, as shown below:

Table 5: Allocation of Program Costs

	Proportion of Benefits	Allocation of Costs ($millions)	NPV of Costs ($millions)
Distribution System / Rates	32%	5.89	5.25
Bulk System / GA	68%	12.31	10.97
Total	**100%**	**18.21**	**16.22**

Having identified both NPV of costs and benefits at the bulk and distribution system levels, the cost-effectiveness calculator can determine DST and EST results, as shown below.

Table 6: DST and EST Cost Effectiveness Results

Distribution Service Test	($millions)
NPV Distribution Benefits	9.47
NPV Distribution Costs	5.25
Net Benefit	4.22
DST Ratio	**1.80**

Energy System Test	($millions)
NPV Energy System Benefits	19.80
NPV Energy System Costs	10.97
Net Benefit	8.83
EST Ratio	**1.80**

The results of the EST and DST show that the Program is cost-effective under the OEB's BCA Framework, and qualifies for participation in Stream 2 eDSM. Having designed the Program parameters and confirmed cost-effectiveness, the LDC prepares a submission to the IESO for review of the Program.

3.3 Utility Incentives

As shown above, the utility has included within its Program budget a utility incentive for successful delivery of results under the Program. The incentive's design is expected to be guided by the OEB's Filing Guidelines for Incentives for Electricity Distributors to Use Third-

Party DERs as Non-Wires Alternatives, which identifies three approaches to utility incentives:

- **Shared Savings:** Calculates the savings for customers from NWS's and allocates a formula-based portion of savings to the distributor's shareholders.
- **Performance Target or Scorecard-Based Incentive ("Scorecard"):** Allows a distributor to earn a fixed incentive payment, based on its performance against an established target or scorecard metrics.
- **Margin on Payments:** Allows a distributor to add a margin on payments to NWS providers (customers or third parties) for providing services to the distribution system.

Were the LDC in this illustration to elect a Shared Savings incentive, the utility would need to specify the proportion of savings it proposes to claim as an incentive and include this amount in its budgets. Were the LDC in this example to propose 25% of total net benefits as appropriate, the Shared Savings incentive would be derived as shown below. The incentive would be claimed on the basis of actual evaluated savings.

Table 7: Shared Savings Incentive

	($millions)
Total NPV Net Benefits	13.05
% Incentive	25%
Shared Savings Incentive	**3.26**

Were the LDC in this illustration to elect a Scorecard or Margin on Payment approach, the LDC would first have to determine the basis on which to establish the overall incentive amount. As an alternative to relying on Shared Savings for this purpose, the utility may consider evaluating the foregone Return on Equity (ROE) resulting from the deferral of the TS in this example. Analyzing the impact of deferring a $40 million TS by a period of 5 years, the NPV of foregone ROE over the life of the TS in this example is shown below:

Table 8: Foregone ROE due to NWS

	($millions)
Lifetime ROE of TS	
Base Case	30.23
NWS Case	30.23
NPV of Lifetime ROE of TS	
Base Case	16.60

NWS Case	13.64
Difference	**2.96**
Per Year (1/5)	**0.59**

Having determined the appropriate incentive amount, whether by the Shared Savings methodology, Foregone ROE methodology, or other substantiated method, the LDC can design an incentive for the Scorecard or Margin on Payment approaches.

A Scorecard approach would establish the total eligible incentive amount available, and determine threshold targets at which the LDC would earn some or all of the available incentive. This is consistent with the mature Scorecard approach used for natural gas DSM in Ontario.

To determine a Margin on Payment incentive, the LDC would divide the total incentive amount by forecast kW of savings, as shown below. To the degree the LDC fails to achieve the forecast kW savings, the incentive received will be less than the planned amount. To the degree the LDC delivers kW beyond forecast, these savings will yield incremental benefits for the bulk and distribution systems, justifying incremental incentives earned by the utility.

Table 9: Margin on Payment Incentive

	($)
Total Planned Incentive	2,955,251
Total Planned kW Savings	10,000
$/kW	**296**

The illustrative Program in this Appendix relies on a Margin on Payment approach utilizing the figures shown in Tables 8 and 9 above. The utility incentive forecast within the Program budget corresponds to forecast kW savings over the 5-year term of the Program.

3.4 IESO Review of Program

To submit the planned Stream 2 eDSM Program to the IESO, the LDC completes a program funding request form outlining the basic program target market, anticipated results, and other technical specifications. The LDC's submission includes the quantitative outputs of the IESO's cost-effectiveness calculator, demonstrating that the EST and DST results are in alignment with Stream 2 eDSM policies and expectations. Finally, the LDC submission provides evidence that the initiative is non-duplicative of ongoing province-wide or regional eDSM programs and supportive of the eDSM Directive.

In reviewing the LDC's submission, the IESO completes the following:

- Confirmation of cost-effectiveness and non-duplication, including the review of underlying assumptions for consistency with the MAL (or other source, as appropriate);
- Coordination with the LDC to refine the Program's assumptions or address data gaps as needed, potentially resulting in minor adjustments to Program details; and,
- Confirmation of an overall maximum budget for the Program which is to be funded by the GA.

3.5 IESO Confirmation of Analysis

On successful completion of its review, the IESO issues a Confirmation Letter to the LDC including:

- A summary of the confirmed cost-benefit outcomes (EST, DST);
- Confirmation of the proposed distribution versus bulk cost allocation;
- Confirmation that GA funds are available for the bulk-share portion of costs, contingent on OEB approval of distribution funding in rates;
- Additional conditions related to program design, delivery, or reporting, if applicable; and,
- Explicit mention of the maximum program budget that the IESO will support through GA funding, establishing the upper limit for costs unless the LDC secures subsequent approval for any expansion.

3.6 OEB Review Process

Having received the IESO's Confirmation Letter and finalized the details of the Program, the LDC proceeds to submit the Program to the OEB in its next IRM, Annual Update, or Cost of Service application.[3] The application to the OEB requests new eDSM rate riders to recover the distribution rate portion of the Program, as derived using the beneficiary pays principle. The LDC also requests use of the eDSMVA to track variances between forecasted and actual program expenses, as well as variances in funding collected through eDSM rate riders. As noted above, included within the Program budget is the proposed utility incentive. In seeking approval of the eDSM rate riders and eDSMVA use, the LDC is also

[3] For clarity, were the eDSM Program required in a rebasing year, the eDSM Program would be proposed within the rebasing application

seeking approval of the distribution portion of the proposed utility incentive for delivery of successful results under the Program.

The LDC's application includes the following:

1. A summary of the identified distribution need, referencing publicly available system planning documents (e.g. Distribution System Plan, capacity maps, regional planning documents), and expected distribution system benefit.
2. The confirmed program design, cost allocation, and estimated budgets; including the allocation of costs and benefits between the bulk and distribution system.
3. The IESO Confirmation Letter, verifying the program's technical viability and cost-effectiveness.
4. A completed Stream 2 eDSM Workform, outlining the forecasted distribution costs and requested rate riders.

Prior to the LDC's application to the OEB, the generic hearing or policy consultation proposed within the Report has been completed, confirming the core processes and parameters governing Stream 2 eDSM. With these parameters established, and being in receipt of the LDC's evidence and the IESO's Confirmation Letter, the OEB determines the application can be heard by Delegated Authority. OEB Staff ask questions of the LDC through standard interrogatory processes to confirm necessary details and clarifications regarding the Program, including review and confirmation of the completed eDSM Workform. The Delegated Authority issues approval of the eDSM-related requested relief as part of the delegated Decision and Rate Order for the IRM or Annual Update application.

The Decision approves implementation of the proposed eDSM rate riders in distribution rates, as well as the use of the eDSMVA.

3.7 IESO-LDC Contribution Agreement

The LDC provides the OEB's Decision and Order approving distribution funding for the Program to the IESO, and requests a Contribution Agreement to facilitate the GA funding required for the Program. The IESO prepares and executes the Contribution Agreement with the LDC.

3.8 Program Execution

The LDC proceeds to execute the Program over the 2025 to 2029 period. No material variances in expenditures or anticipated savings are experienced over the delivery term for the Program, and as such the LDC is not required to re-engage with the IESO or OEB for modifications to the Program.

3.9 Annual Reporting

The LDC provides reporting to the IESO and OEB in accordance with the provisions outlined in the Report to which this illustration is appended. The LDC does not experience material variances in expenditures or savings relative to forecast, and as such provides informational updates only to the OEB on an annual basis. Balances in the eDSMVA will be included within annual reporting to the OEB, however as a Group 2 Variance Account the eDSMVA is only disposed of in the LDC's Cost-of-Service application.

3.10 Program Close-Out

At the end of 2029, the LDC completes delivery of the Program. Over the course of early 2030, the LDC prepares the final documentation and information required to inform the IESO's evaluation of 2029 results, as well as overall process evaluation for the 2025 to 2029 term. The LDC submits this information to the IESO in the standardized format required by the IESO.

Over the course of 2030, the IESO completes program evaluation of 2029 results, and process evaluation of the 2025 to 2029 Program implementation. In the fall of 2030, the IESO provides the results of its evaluation to the LDC, documenting final expenditures, savings, and overall performance of the Program.

The results of the IESO's evaluation shows that the LDC was able to modestly over-deliver on Program results relative to forecast, as shown below. Having met its target for distribution capacity savings, the LDC is engaged in planning with the IESO and Hydro One Networks Inc. for the construction of the required TS in 2033 as planned, and is not anticipating unmanageable capacity constraints prior to its in-service date.

Table 10: Forecast vs. Actual Results

	Forecast	Actual	Variance
kW	10,000	10,570	570
kWh	4,000,000	4,228,000	228,000
Capacity Avoided Costs ($M)	17.91	18.93	1.02
Energy Avoided Costs ($M)	1.89	2.00	0.11
Distribution Avoided Costs ($M)	9.47	9.47	0.00
Total Benefits	**29.27**	**30.40**	**1.13**

The achievement of incremental results required the funding of incremental customer incentive amounts of $456,000. Conversely, the cumulative impacts of variances in Administration Costs, Marketing & External Costs, Evaluation Costs, and the Utility

Incentive was an underspend of $530,000, resulting in net underspending relative to forecast of ($71,551), as shown below:

Table 11: Forecast vs. Actual Expenditures

Item ($millions)	Forecast	Actual	Variance
Incentive Costs	10.00	10.46	**0.46**
Admin Costs	3.75	3.42	**-0.33**
Marketing & External Costs	1.00	0.75	**-0.25**
Evaluation Costs	0.50	0.38	**-0.12**
Utility Incentive	2.96	3.12	**0.16**
Total	**18.21**	**18.13**	**-0.07**

The results of variances in both costs and benefits yield final evaluated EST and DST results via the IESO, as shown below:

Table 12: Final EST & DST Results

Distribution Service Test	($millions)
NPV Distribution Benefits	9.47
NPV Distribution Costs	5.03
Net Benefit	4.44
DST Ratio	**1.88**

Energy System Test	($millions)
NPV Energy System Benefits	30.40
NPV Energy System Costs	16.15
Net Benefit	14.25
EST Ratio	**1.88**

With results evaluated, the variance in expenditure of ($71,551) must be allocated between the GA and distribution rates on the basis of relative final benefits between the bulk and distribution systems, as shown below:

Table 13: Allocation of Expenditure Variance

	Proportion of Benefits	Allocation of Variance ($)
Distribution System / Rates	31%	(22,292)
Bulk System / GA	69%	(49,259)
Total Avoided Costs	**100%**	**(71,551)**

A credit of ($49,259) is returned to provincial ratepayers through agreed upon settlement processes between the LDC and the IESO. A credit of ($22,292) is allocated to the Distribution System, triggering a credit entry by the LDC into the eDSMVA for this amount. Alongside variances in eDSM rate rider revenues tracked in the eDSMVA over the 2025 to 2029 period, this credit will be cleared to rate payers within the LDC's Cost-of-Service application. Cost allocation of variances tracked in the eDSM is established in accordance with the OEB policies determined in the generic proceeding or policy consultation regarding Stream 2 eDSM.