

Environmental Registry of Ontario

Gabriel Weekes

Ministry of Energy and Electrification, Conservation and Renewable Energy Division

77 Grenville Street, 5th Floor

Toronto, ON

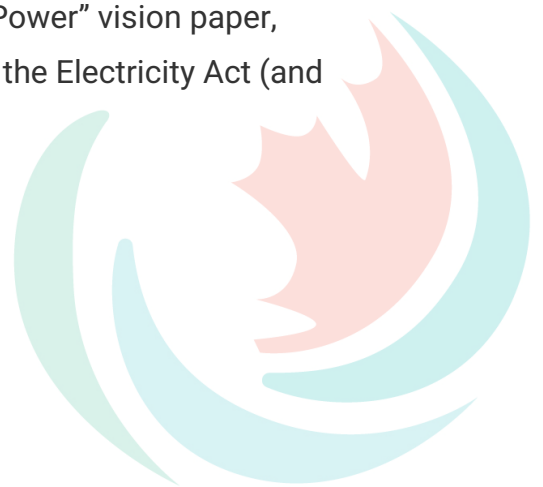
Re: 2025-2036 Electricity Energy Efficiency Framework, ERO #019-9235

Dear Mr. Weekes,

Efficiency Canada welcomes the opportunity to comment on the proposed electricity demand-side management (eDSM) framework, which comprises three main components:

- 1) A 12-year term, managed through regular program plan cycles with a comprehensive mid-point (i.e., six year) review
- 2) Expanded programming available to all end-use sectors, with a single-window delivery model for coordinated residential electricity and natural gas programming
- 3) A dedicated budget to support complementary activities by local distribution companies (LDCs), the final form of which is yet to be determined

This framework was released alongside several other actions, including a proposed integrated energy resource plan (guided by the government's "Affordable Energy Future: The Pressing Case for More Power" vision paper, released simultaneously) and proposed amendments to the Electricity Act (and other Acts).



This letter contains Efficiency Canada's comments on the proposed eDSM framework, though these cannot be completely separated from elements in the other proposals.

Term and targets

Efficiency Canada supports a 12-year, long-term framework for electricity demand-side management with a mid-point review. A long-term framework helps to provide certainty to industry and consumers and eliminate the 'boom/bust' cycle that is sometimes characteristic of energy efficiency programming. However, a framework is only as strong as the underlying principles and objectives that inform it – a long-term framework with mediocre targets or weak resource planning mechanisms will not realize the complete affordability or grid resilience benefits of demand-side resources in Ontario.

In that respect, we are uncertain how program budgets and energy savings targets would be set in the proposed eDSM framework. In principle, this might be determined through an integrated resource planning process along the lines of what has been proposed by the government. Yet, it is not clear (based on the materials provided) exactly how system planning and resource optimization will occur in that process.

If that were to be the case, however, we submit that the stated five-year increment between integrated resource plans (as is suggested in the integrated resource plan consultation posting) is insufficient to ensure the province is maximizing the value of demand-side resources on an ongoing basis – particularly during an energy transition, with the accompanying uncertainty about the timing and magnitude of load growth. The economic potential of demand-side resources is likely to change substantially over five years.



Load forecasts heavily influence the determination of energy efficiency potential. The 2022 Achievable Potential Study refresh found roughly a 16 per

Load forecast year	Annual load growth factor
2019	0.8%
2020	1.2%
2021	1.7%
2022	1.8%
2024	1.9%
P2D	2.7%

Table 1: Estimated Annual Planning Outlook load forecast growth factors

cent increase in cumulative energy and capacity savings over the earlier 2019 potential study – due in large part, the refresh study noted, to increased load forecasts and revised avoided cost assumptions. The 2019 Annual Planning Outlook (the basis of the 2019 Achievable Potential Study) estimated a 17.5 per cent total increase in energy demand over its period, and the 2021 forecast estimated 38 per cent. According to the consultation

posting, the IESO is now estimating 75 per cent growth in demand by 2050. It should be noted that the IESO's 2022 Pathways to Decarbonization (P2D) report forecasts nearly 98 per cent growth in demand by 2050.

Note in Table 1 the average annual load growth factors associated with the past five APOs and the 2022 Pathways to Decarbonization (P2D) report. Load forecasts are rapidly increasing, and the latest estimate still falls far short of the projections of what would be associated with decarbonization by 2050. If the government and IESO proceed to establish budgets at the outset of the framework and only revisit them at the mid-point (as was done under the current framework), the province risks leaving a lot of cost-effective energy efficiency potential on the table as the context rapidly changes, thereby forgoing the long-term and cumulative benefits for affordability and grid reliability and resiliency.



There are multiple ways the province could set clear rules and targets for the acquisition of demand-side resources in the proposed eDSM framework prior to establishing budgets:

- 1) Establish an energy efficiency resource standard (EERS):** An EERS sets long-term targets for energy savings to be met by utility or non-utility program administrators and is similar in concept to a renewable energy or renewable portfolio standard. According to the [American Council for an Energy Efficiency Economy \(ACEEE\)](#), over 25 states have established an EERS, the strongest of which require more than 2.5 per cent energy savings-as-a-percentage of sales per annum ([New York's target is 3 per cent](#)). In Canada, the governments of Manitoba and New Brunswick have established such standards – the former requiring 1.5 per cent in electricity savings, the latter setting a target schedule that increases to 0.75 per cent by 2028/9.

While this method has the benefit of setting a clear long-term target, it risks setting it uneconomically, leading to suboptimal resource allocation in integrated resource planning. Such targets should, therefore, be considered minimums, to be exceeded if there is greater value to energy systems and society. To ensure they are minimums rather than maximums, government policy should complement targets with planning rules that prioritize demand-side solutions as a resource option during ongoing energy system planning.

- 2) Full integration of demand-side resources in a transparent, integrated resource planning process:** Ensure full and fair incorporation of demand-side resources into the province's proposed integrated resource planning strategy. Several studies ([1](#), [2](#), [3](#), and [4](#)) have noted that the best practice for incorporating demand-side resources into resource planning



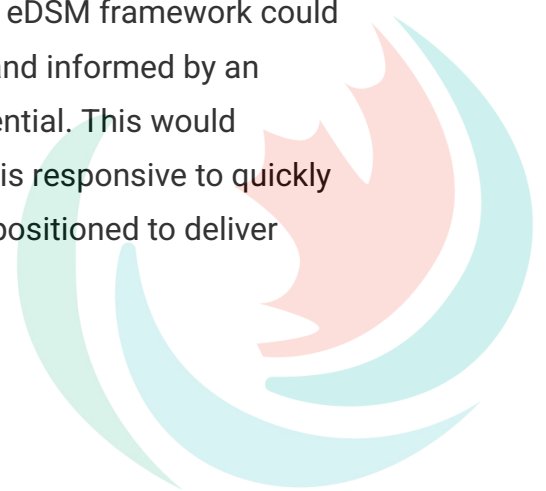


practices is to ensure they are included in system optimization modelling in a way that allows them to both impact and be impacted by other outputs of the model. However, recent research by Efficiency Canada has found this practice is far from widespread in provincial utility integrated resource planning.

This approach requires substantial modelling improvements to be effective (i.e., to capture more granular temporal and spatial impacts of energy and capacity savings) and a full and fair assessment and inclusion of costs and benefits associated with demand-side resources. However, the stated intention of renewing the integrated resource plan only every five years risks falling behind rapidly changing load requirements, potentially underestimating the cost-effective potential of energy efficiency and other demand-side resources.

- 3) Mandate all cost-effective energy efficiency potential, informed by regular updating of potential studies:** A third option that could mitigate risks associated with the prior two strategies is to establish a clear mandate for the pursuance of all cost-effective energy efficiency (i.e., equivalent to 'Scenario B' in the 2022 achievable potential study refresh), alongside a commitment to renewing the achievable potential study on a two to three-year basis (to align with regular updating of the Annual Planning Outlook).

Rather than having only one mid-point review, the eDSM framework could be aligned with the IESO three-year review cycle and informed by an essentially evergreen estimate of achievable potential. This would ensure that the scale and scope of programming is responsive to quickly evolving system requirements and that it is best positioned to deliver long-term affordability to consumers.

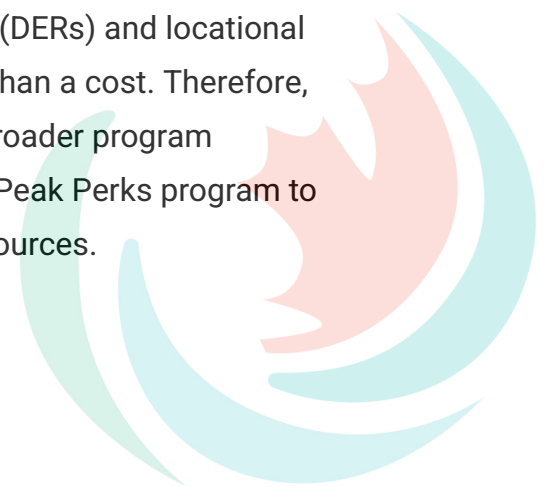


Programs and budgets

Efficiency Canada fully supports the vision of the eDSM strategy to ensure all customers have access to an expanded program portfolio with a core focus on energy affordability. We strongly encourage the province to adopt a comprehensive understanding of affordability that focuses on the long-term benefits of energy efficiency on customer bills (and the cumulative benefits of early and aggressive action on energy efficiency for the grid more broadly) and not solely the short-term impacts on rates.

We also support the proposal for a single-window delivery model for residential customers to access both electricity and natural gas programming, with one caveat: the focus of residential programming should be beneficial electrification and not include incentives for natural gas heating equipment. This aligns with the [Ontario Energy Board's ruling](#) in Enbridge's 2022-2027 DSM plan that the utility's residential whole-home program would offer no incentives for gas equipment as they were already subject to high-efficiency standards. The Board also wrote that electrification was "consistent with DSM objectives of reducing natural gas consumption."

We note that the separate proposal to amend the Electricity Act to allow the IESO to develop beneficial electrification programs is a positive development that aligns with this recommendation. This will enable the IESO to not only support electrification but to make sure it is done smartly – by creating offsetting electricity-saving initiatives, and coupling new electricity loads with demand flexibility through distributed energy resources (DERs) and locational efficiency to turn new demands into a grid asset rather than a cost. Therefore, the proposed eDSM framework should contemplate a broader program portfolio, building upon or expanding initiatives like the Peak Perks program to encompass a broader range of demand-side energy resources.



While budgets for the eDSM framework should ideally be informed by a target-setting mechanism as outlined above, the most recent potential study and our annual survey of provincial energy efficiency budgets and targets offer some benchmarking for the province to consider. The annual budget of programs in the first five years of the 2022 potential study refresh was \$400 million. In our most recent survey of provincial energy efficiency spending, Ontario spent approximately \$7 on electricity efficiency programs per capita. BC Hydro and Hydro Quebec each spent approximately \$19 per capita, while Efficiency Nova Scotia spent nearly \$60 per capita. Hydro Quebec has also recently stated an intention [to double its energy efficiency efforts](#) and is [tripling its budget](#) for 2025 to \$500 million (roughly \$56 per capita).

Accordingly, we suggest that the preliminary budget for the eDSM framework be set at a minimum of \$500 million in 2025 but up to \$900 million to support a broader program portfolio, realize the full economic potential of energy efficiency, and match leading Canadian provinces.

Role of the LDCs

Efficiency Canada supports the proposal to include a dedicated budget to support some activities by local distribution companies (LDCs), particularly in connection with regional distribution level planning. These activities can help uncover the benefits of demand-side management and distributed energy resources in reducing and avoiding expensive infrastructure costs, and empowering community energy planning initiatives. The LDCs are well positioned to deliver enhanced, local programming to provide the demand flexibility necessary to ensure an affordable, reliable and resilient grid in the context of electrification.

Regards,
James Gaede, Ph.D





Efficiency Canada
c/o Carleton University
1125 Colonel By Drive
Ottawa, ON K1S 5B6

Director of Research
Efficiency Canada

