

September 22, 2023

c/o Shalin Nayak
Ontario Ministry of Energy, Conservation and Renewable Energy Division
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This letter constitutes the submission of Energy Storage Canada (“ESC”) to the Ministry’s invitation for comments on Electricity Energy Efficiency Programming Post 2024.

ESC is a not-for-profit organization and the only national trade association in Canada dedicated solely to the growth and market development of the country's energy storage sector as a means of accelerating the realization of Canada's ongoing energy transition and Net Zero goals through advocacy, education, collaboration, and research. ESC’s technology-agnostic approach allows for a diverse membership of 90 members representing the end-to-end value chain of the country's energy storage industry.

We would be happy to speak to our comments in greater detail as required.

Sincerely,



Justin W. Rangooni
Executive Director
Energy Storage Canada

Questions:

I. Objectives and targets, definition, and funding source

A. Objectives and targets

The primary objectives of the current 2021-24 CDM Framework include:

- Helping to cost-effectively meet local, regional, and/or system-wide electricity needs.
- Helping electricity consumers who are most in need to receive electricity-saving measures, such as small business, commercial, institutional, industrial, low-income, and First Nation customers.

Within the current CDM Framework, typical targets include energy savings (in TWh) and peak demand reductions (in MW).

Through the Mid-Term Review stakeholder engagements, the IESO heard an increasing interest in decarbonization and electrification opportunities, and distributed energy resources (DERs). Further, energy costs can be a significant burden on households, in particular those with lower incomes.

1. How sufficient are the current primary objectives and targets for addressing evolving system and customer needs?

The primary objectives and targets need to be updated to align with current government policy and customer preferences. There are three key areas where changes can occur. First, CDM activities can support customers in meeting both their energy needs and the needs of the power systems. In other words, CDM activities can support customer reliability objectives as well as meeting broader electricity needs. Second, CDM activities can cost-effectively lower long-term cost for customers by reducing carbon emissions and reducing exposure to future carbon pricing mechanisms and energy volatility.

2. Should additional objectives or targets be considered when developing electricity energy efficiency programming? For example, objectives and/or targets relating to beneficial electrification (replacing fossil fuel use with electricity in a way that reduces overall emissions and energy costs), overall grid efficiency including demand flexibility (reducing, increasing or shifting customer load), electricity bill reduction, etc.

Yes, additional objectives should be explored. In ESC's view, there are three areas that require further investigation under the CDM mandate. First, carbon emission reduction potential from CDM activities should be considered. For example, energy storage resources can be used by customers to shift consumption from carbon intense hours to low emission hours while also reducing strain on the power system. Second, land use is an important area where additional objectives should be considered. CDM activities are not just economically effective but can be physically efficient when integrated with existing buildings and infrastructure. CDM activities such as on-site generation and energy storage can offer substantial scalability to energy solutions that help manage the inherent uncertainty of the future supply mix. CDM activities offer customers flexibility and the ability to manage energy needs that are adaptive to future system configurations and cost impacts. Finally, CDM activities should consider resiliency benefits to customers under extreme circumstances or shifting weather patterns. For example, onsite storage and renewable generation in remote communities can offer a consistent energy solution (albeit

at a potentially lower capacity for emergency purposes only) if repairs to the power system are expected to be long or difficult. In many cases, operation of local resources such as a behind-the-meter energy storage asset can be coordinated to benefit customers and the grid at the same time.

B. Definition:

The current definition for electricity energy efficiency programming under the 2021-2024 CDM Framework is as follows:

The IESO shall consider CDM to be inclusive of activities aimed at reducing peak electricity demand and/or electricity consumption from the electricity system. Examples of CDM include energy efficiency replacements whereby similar output is achieved with less electricity, and behind-the-meter consumer generation.

However, for the purposes of the CDM programs, the IESO shall consider CDM to exclude:

- Those measures promoted through a different program or initiative undertaken by the Government of Ontario or the IESO; and
 - Behind-the-meter consumer generation that uses fossil fuels purchased from or otherwise supplied by a third party as a primary fuel source.
3. Does this CDM definition appropriately capture DER, and demand response (DR), and other opportunities arising from new technologies and business models that enable greater customer choice to achieve more electricity savings within CDM? If not, what changes should be made recognizing there may be other revenue options and models that may become available to DERs (e.g., local and wholesale electricity markets) outside of CDM?

The CDM definition should be broadened to include any technology or service that more efficiently utilizes energy and/or existing energy infrastructure to reduce customer costs and system impacts on the environment, economy, and society. Restrictions such as excluding CDM measures that are promoted through different programs leads to silos within the energy industry reducing the potential for value stacking and net-benefits for customers. It also means that CDM measures must be hyper-focused on IESO program objectives and cannot be allowed to innovate to meet multiple customer and system needs. Finally, restrictions on funding for CDM measures based on near sighted assumptions of the electricity system reduces adaptivity and can lead to higher costs overall as the system must invest more heavily to compensate for lower flexibility.

4. Should the definition consider additional elements such as beneficial electrification?

Yes, demand growth due to fuel switching or other carbon emission reduction should be considered as part of the CDM definitions. During the previous CDM framework (2021-2024) Ontario was expecting moderate demand growth. With significant load growth expected, CDM activities that optimize the electrification of economic sectors should be considered, especially if offering substantial carbon emission reduction benefits. Further, electrification that better utilizes the existing infrastructure and energy supply mix (i.e., increases consumption during off-peak time periods) should be supported to reduce per unit cost for customers and ensure energy investments are best integrated into the electricity grid.

C. Funding Source

5. Currently, funding from electricity ratepayers through the Global Adjustment (GA) can support electricity energy efficiency programs that target local and/or regional needs and which also demonstrate cost effectiveness at the system-wide level. How do we determine the extent to which local and/or regional programs are to be funded by all electricity ratepayers (i.e., through the GA)?

The GA is a broad catch basin for many different energy programs including generation supply contracts, rate-regulation supply assets and CDM programs. To provide clarity and visibility to customers, CDM activities should be collected through a separate mechanism that is clearly indicated on the customer bills and is reflective of the cost savings customers can expect from the measures. This will avoid cross subsidization and reduce the complexity of the GA for customers and investors. Examples of separate line items for CDM activities can be found throughout North America.

6. Currently, DER and DR activities can be funded through the GA if they meet the CDM definition. Beneficial electrification is not an eligible CDM activity. Should beneficial electrification be an eligible CDM activity; and if so, what funding source is most appropriate (e.g., electricity ratepayer, natural gas ratepayer, taxpayer)?

Yes, beneficial electrification should be an eligible CDM activity as long as it can demonstrate long-term savings for customers. Collection of beneficial electrification should be based on the customer group that benefits. For example, if there is electrification of space heating to avoid expensive natural gas system upgrades then natural gas ratepayers should fund the expense. If the electrification has broad benefits from climate action (e.g., EV infrastructure), then potentially taxpayers should fund the CDM activities. Overall, CDM funding should be offered if the beneficial electrification also encourages the adoption of the highest efficiency of process, equipment or service possible at the time of investment.

II. Responsiveness to system needs

The IESO's 2022 Mid-Term CDM Review found that the current CDM framework could be more flexible to enable larger and faster adjustments to programs and budgets mid-framework to better respond to fast-evolving needs. Stakeholders also indicated that the current "start and stop" model, which has all programs end and new programs start on a specific date, is inefficient and causes confusion among consumers and uncertainty among service delivery agents.

7. Would a more enduring commitment to energy efficiency programming and funding produce better outcomes? What could this look like?

Yes, enduring commitments and/or regular procurement mechanisms provide support for investment, innovation, and customer engagement. This provides more customized, community supported and cost-effective outcomes.

A key process option is to establish a regular procurement mechanism that allows energy efficiency services that target and align with, as well as adapt over time, to various system needs whether by attribute, physical location or customer class target. Allowing energy efficiency to participate in the

IESO's capacity auction to help accelerate the adoption of energy efficiency measures has a net benefit for the system and the customer.

8. In the context of the energy transition and growing electrification needs, how can electricity energy efficiency programs be better integrated into electricity distribution and transmission system planning as well as resource procurements?

Energy efficiency programs and customer-based CDM activities require customer participation and insight. To get appropriate information from customers, paths to profitable investments must be provided to customer that are not focused on last minute delivery of narrowly defined system needs. Instead, energy efficiency programs require regular procurement activities to inform system planners regarding capability and costs that can be integrated into planning decisions. For example, a local capacity or energy efficiency call at the start of each planning process to gauge customer capability, interest and potential costs provides value input into the planning process. If the energy efficiency call results in a potential cost-effective option being available, a more detailed and stringent procurement process could be run to acquire those services. Without the first stage, planners are left with only desktop analysis and broad estimates for services that are inherently locally focused. For example, residential energy storage services can meet customer needs and could be offered to regional transmission system for a portion of the customer's cost. Without a public call for capacity the planners would not be able to determine the potential value of that capacity.

9. What additional tools could be used to develop energy efficiency programming budgets and targets? Examples of existing available tools include:
 - Achievable Potential Studies, which evaluate how much electricity energy efficiency is possible from a technical, economic, and market potential basis.
 - Annual Planning Outlooks, which provide a long-term view of electricity demand needs in Ontario and indicates the relative economic value of CDM. This report is updated on an annual basis.
 - Annual Acquisition Reports, which specify the mechanisms to provide a flexible and cost-effective approach for competitively securing electricity resources necessary to meet demand.

Energy efficiency programming budgets and targets provide fluid outcomes from various micro and macro economic inputs. Procurement activities that encourage participants to offer their latest estimates of costs and capabilities are an excellent option to gain insight into budgeting and targets.

10. How can electricity energy efficiency programs be better integrated or coordinated with other policy initiatives such as procurements (e.g., of DER resources), pricing schemes, building codes and energy efficiency standards, to help manage electricity demand and reduce GHG emissions?

ESC has no comment.

11. What are examples from other jurisdictions where demand flexibility and targeted energy efficiency have helped optimize the use of the existing grid in constrained areas or where the grid is under-utilized? For example, aggregated demand response program, DER and non-wires alternatives, energy storage, locational value and electricity pricing options, etc.

ESC has no comment.

III. Improving customer experience

Energy efficiency programs are uniquely positioned to engage directly with electricity customers, to help inform behaviours and provide choice that will benefit both customers (e.g., through electricity bill reductions) and the system (e.g., through reducing reliance on additional infrastructure investments including resource procurements). There is an opportunity with electricity energy efficiency programming to improve the customer experience and enhance customer choice to achieve greater impact.

A. Needs:

12. What additional support is needed to get customers to undertake more energy efficiency?
13. What should the government consider when communicating the benefits and motivations behind energy efficiency programs to encourage participation and improve public awareness? Examples of benefits are cost savings, comfort, enhanced customer choice, etc.
14. Are there best practices from other jurisdictions on improving customer engagement in energy efficiency particularly for the hard-to-reach segments?
15. How can we make better use of technology to achieve our electricity energy efficiency goals?

ESC has no comment.

B. Coordinated delivery:

Electricity and natural gas energy efficiency programs are currently delivered under separate policy frameworks. Stakeholders have indicated that outcomes in both programs would be improved if there was more coordination between electricity and natural gas energy efficiency programs. Benefits could include more customer choice, improved customer experience, and administrative efficiencies (e.g., from joint procurements).

16. What opportunities should Ontario consider, to improve the coordination of electricity and natural gas energy efficiency frameworks, program delivery, and oversight?
17. What common performance metrics could be used to design, track, and evaluate coordinated energy efficiency activities (e.g., cost benefit tests, emissions reduction goals)?
18. Are there examples from other jurisdiction where natural gas and electricity energy efficiency program planning and delivery are integrated?

ESC has no comment.

IV. General

The IESO's Mid-Term review of the 2021-2024 CDM Framework, including programming, was released in December 2022. Please share any further feedback on any of the existing programming, including opportunities for improvement or lessons learned from other jurisdictions.

ESC has no further comment.