

Written Submission for the Pre-Budget Consultations in Advance of the Upcoming Federal Budget

Suggested citation

Haley, B. 2024. Written Submission for the Pre-Budget Consultations in Advance of the Upcoming Federal Budget. Efficiency Canada, Carleton University, Ottawa, ON.

August 1, 2024

© Efficiency Canada

c/o Carleton University

1125 Colonel By Drive

Ottawa, ON K1S 5B6

<https://www.encycanada.org>

Facebook: <https://facebook.com/EfficiencyCanada>

LinkedIn: <https://linkedin.com/company/efficiency-canada>

Instagram: <https://instagram.com/encycanada>

List of recommendations

- Recommendation 1: That the federal government provide funding in the amount of \$6.5 billion over four years to expand and reorient the Smart Renewables and Electrification Program (SREPs) towards demand side energy solutions like energy efficiency, implementing a Canada Electricity Advisory Council recommendation.



Canada needs more clean electricity to attract future industries and to decarbonize heating, industry, and transportation.

The lowest cost and highest benefit way to meet current and future electricity demand is by increasing electricity savings. Saving energy and optimizing the timing and location of energy demand is often the lowest cost option compared to building power plants, burning fuel, and/or building transmission lines.¹ When Canadians participate in energy efficiency programs, they make their lives more affordable while increasing comfort and health.² In energy systems, utilities and their regulators refer to “demand side management” (DSM) as a way to shape demand as an option alongside generating more energy.

The current mix of federal policies is lopsided toward supply side solutions and neglects lower cost and higher benefit demand side options.

The May 2024 report by the Canada Electricity Advisory Council³ recognizes this supply side bias and its potential to increase costs unnecessarily. The Council is an independent body of 19 electricity sector leaders created shortly after the 2023 federal budget to advise the Minister of Energy and Natural Resources. The Council’s report states that the 2023 federal budget “was largely silent on the demand side of the equation” and that “significant improvements to energy efficiency and load flexibility can dramatically reduce the need for expensive new electricity infrastructure.” The report finds that reducing the costs of future electricity systems must be a priority, and the Council said it “believes that significant gains in energy efficiency and DSM can significantly reduce costs.”

¹ <https://www.aceee.org/topic/energy-efficiency-as-a-resource>

² <https://visualizingenergy.org/what-are-non-energy-benefits-of-home-weatherization/>

³ Powering Canada: A Blueprint for Success <https://natural-resources.canada.ca/our-natural-resources/energy-sources-distribution/electricity-infrastructure/the-canada-electricity-advisory-council/powering-canada-blueprint-for-success/25863>



Re-balance supply and demand side energy solutions

The Council's recommendation 25 is to "Prioritize demand management in federal supports." Specifically, it recommends transitioning the Smart Renewables and Electrification Program (SREPs) toward supporting demand-side solutions like energy efficiency, demand flexibility and related grid modernization initiatives.⁴

The rationale for this recommendation is that "relative to growing capacity for renewable electricity, there has been disproportionately less federal focus on DSM and grid modernization initiatives."

Indeed, the key bottleneck for increasing the amount of renewable energy on electricity grids will be the ability to integrate it in a cost-effective manner and match complementary grid solutions to the speed of renewable deployment. As more wind and solar power are added to the grid, the value of demand flexibility solutions that can charge up items like electric vehicle batteries and hot water tanks during periods of wind and solar availability increases. In addition, as more heating systems use electricity, the benefit from reducing demand during peak periods through energy efficiency and demand shifting also increases. It is time to focus on these energy system bottlenecks, and demand side solutions are more affordable, faster to deploy, and more empowering to customers compared to supply side options like transmission lines or natural gas "peaker" plants.

⁴ Demand flexibility refers to the ability to ramp up and down energy demand during certain times and across space. For instance, a hot water tank can be heated when the wind is blowing and ramped down during peak power periods, while the customer still receives hot water stored in the tank. This strategy can reduce peaks and increase the efficiency and utilization of electricity grids, acting as an alternative to transmission lines or building power plants for peak periods.

Grid modernization can refer to installing the digital architecture that enables demand flexibility and demand side management. For instance, vehicle-to-grid systems where the utility can communicate that a customer's vehicle battery will be charged during off-peak instead of on-peak.

In Budget 2025, we recommend reorienting SREPs to match provincial utility DSM dollar for dollar while maintaining independent funding for Indigenous-led projects.

A matching funding policy would incentivize provincial utilities to increase their contributions to DSM. This will provide a powerful incentive, given that most utility DSM programs must pass cost-benefit tests, and match funding will either buy down costs or increase the benefits of additional investment.

We recommend that match funding be available for both electricity and gas utility DSM program portfolios, with a stipulation that funds related to gas DSM not be used to incentivize the installation of new gas equipment. Gas DSM matching funds can be used for strategies such as industrial and commercial energy management and building envelope upgrades that reduce bills and greenhouse gas emissions regardless of fuel source used and which could save electricity if and when customers choose to switch fuels.⁵

A match funding mechanism enables flexibility for provinces and territories to tailor demand side solutions to regional contexts, as emphasized in the recent Canada Green Buildings Strategy.⁶ The federal government can, however, encourage funds to be used for activities that might otherwise be insufficiently encouraged in utility DSM strategies. This can include:

- Energy reliability and climate resilience benefits such as placing grid-connected batteries in customer and community buildings to act as a backup power source and enabling community buildings to maintain

⁵ Federal funding has already created policy changes in utility gas DSM. In Ontario, the co-delivery of the Greener Homes Grant with Enbridge gas resulted in the Ontario Energy Board mandating that gas DSM incentives be used to support both full and partial electrification to coincide with the federal program. The OEB noted that this increased customer choice and was consistent with the objective to reduce gas demand. For discussion see forthcoming Efficiency Canada report on “Breaking Fuel Silos in Demand Side Management”.

⁶ <https://natural-resources.canada.ca/transparency/reporting-and-accountability/plans-and-performance-reports/departmental-strategies/the-canada-green-buildings-strategy-transforming-canadas-buildings-sector-for-net-zero/26065>

- temperature during power outages through high-performance insulation and building envelope improvements.
- Deep energy saving retrofits.
 - New approaches to engage customers in demand flexibility, with a specific focus on improving affordability for those with the highest energy cost burdens.
 - Better measurement and assessment of energy saving opportunities through process improvements, such as air sealing and quality installation and commissioning of heat pumps.
 - Strategies to promote structural changes or market transformations in supply chains, such as supporting new contractor business models, increasing the availability of energy saving products in local markets, etc.
 - Distributed energy generation resources like solar battery systems or district energy systems that might not currently be defined as DSM.

The suggested budget is \$6.5 billion over four years. This would enable federal matching to support a 1.4 times increase in provincial utility DSM budgets (12 per cent annual growth), with at least 10 per cent of the budget (\$640 MM) dedicated to Indigenous-led initiatives, as well as administration and evaluation.⁷

Supporting DSM in the 2025 federal budget will show that the federal government is committed to enabling electrification of the economy in a way that enhances affordability and energy reliability for Canadians while also demonstrating forward movement on the Canada Electricity Advisory Council recommendations.

⁷ Total DSM spending in Canada in 2022 was \$1.23 billion. See James Gaede and Alyssa Nippard's 2023 Energy Efficiency Programs Updates: Provinces and Territories. <https://www.energycanada.org/programs-report/>

Note that \$10 million of DSM budgets were spent on Indigenous partnered projects in 2022, and this aspect of DSM portfolios could also be increased with federal match funding, in addition to direct funding for Indigenous-led initiatives.



Brendan Haley is Senior Director of Policy Strategy at Efficiency Canada and adjunct research professor at Carleton University's School of Public Policy and Administration. He has a background in promoting innovative energy efficiency policy solutions, including advocacy for the creation of Canada's first energy efficiency utility (Efficiency Nova Scotia) while at the Ecology Action Centre, founding an energy poverty advocacy organization (Affordable Energy Coalition), leading the writing of Efficiency Canada's Retrofit Mission report which proposes an innovation-oriented approach to building retrofits, authoring academic publications on topics such as moving utility demand side management towards a low-carbon transition governance paradigm. He completed a Public Policy PhD at Carleton University relating systems of innovation and Canadian political economy approaches to Canada's low-carbon transition, a Bachelor of Science in Economics from Dalhousie University, a Master of Environmental Studies (ecological economics) from York University, and was awarded the prestigious Banting Postdoctoral Fellowship in 2016-2018.

Efficiency Canada is the national voice for an energy-efficient economy. Our mission is to create a sustainable environment and better life for all Canadians by making our country a global leader in energy efficiency policy, technology, and jobs. Efficiency Canada is housed at Carleton University's Sustainable Energy Research Centre, which is located on the traditional unceded territories of the Algonquin nation. The views expressed, as well as any errors or omissions, are the sole responsibility of the authors.

