

22 March 2023

Strong energy efficiency targets can help accelerate Canada's transition to net-zero

Efficiency Canada is responding to the Government of Canada's Request for Information (RFI) pertaining to regulatory, policy and market impacts on Canada's electricity grid modernization. In the response, we reference relevant research that we believe will be useful to the federal government as they seek to accelerate the pace of electrification and achieve national clean energy and climate goals.

As stated in the RFI, electricity demand is expected to increase significantly in the coming years. Energy efficiency is an electricity system resource that can help address supply-side constraints by providing energy services as well as peak reduction or renewable integration services through "flexible demand."

Efficiency Canada is the national voice for an energy efficient economy. We are a research and advocacy organization housed at Carleton University's Sustainable Energy Research Centre. In our forthcoming report *Benchmarking Canadian province and American state energy efficiency program savings and spending*,¹ we benchmark North American jurisdictions' use of this energy resource by comparing 2021 efficiency program outcomes (the most recent data available) across states and provinces. The report finds that Canadian provinces lag leading American states in electricity savings and electricity savings targets. In fact, the median state electricity savings target was two and a half times that of the provinces (see figure 1) and median state electricity savings (as a percentage of sales) was nearly one and a half times that reported in the provinces (see figure 2). The top ranked state (California; 1st) saved 2.22% of sales in 2021 and the top ranked province (Nova Scotia; 17th) saved 0.98% of sales.

¹ The benchmarking report will be released March 31st, 2023 at which time it can be found here: <https://www.energycanada.org/comparison/>.



If we look at provincial and state policies, we see that leading states establish energy efficiency resource standards (EERS). These are aggressive, mandatory, long-term targets for efficiency program savings which work to align utility incentives with energy and greenhouse gas emission savings. An EERS often requires an investment in energy efficiency resources that are more cost-effective than supply-side options.

To date, no province has clearly required utility regulators to capture “all cost-effective” energy efficiency. This is often neglected due to concerns over short-term rate impacts despite energy efficiency leading to lower revenue requirements for electricity systems and bill reductions for customers.

If the federal government wants to spur provincial investment in the electricity infrastructure that is required to meet growing demand, they may choose to follow [recommendations on electric federalism](#). If this is the case, provincial governments would receive funds which would help to limit utility rate increases, and in exchange be subject to certain clean energy standards or policies.

Any federal funding to electricity systems should encourage the introduction of an EERS. Provinces may be required to produce a percentage of their new clean energy supply from energy efficiency program savings and/or adopt a clear planning rule such as investing in all cost-effective energy efficiency in an electricity plan aligned with economy-wide net-zero emissions.

A relevant example is the European Union, where Member States recently agreed to increase the energy savings required in the [Energy Efficiency Directive](#) (EED). This update increased the mandatory energy savings targets to 1.5% annually from 2024 to 2030. This was done to both achieve climate goals and reduce reliance on foreign fuel. As would be the case in Canada, regions develop their own approach to achieving the required energy savings based on their unique context.

The EED also recognizes the opportunity to address energy poverty through energy efficiency policy. It requires that a share of energy savings benefit vulnerable individuals, those experiencing energy poverty, or those living in social housing, and that the energy efficiency policy approach developed by Member States has no adverse effects on these populations.



Efficiency Canada released a report in 2022 called [Efficiency for All](#), which discusses challenges faced by low-income homeowners and renters when accessing energy efficiency programs in Canada. Challenges include the need for up-front capital investments and the requirement of participants to take on debt in order to benefit from programs. The report identifies four areas where a federal program could fill gaps that exist due to the boundaries of utility governance systems. These include deeper savings per household, fuel switching/electrification, required non-energy upgrades, and more sophisticated targeting of those most in need.

While current [federal funding to help low-income Canadians switch from oil to low-carbon heating sources](#) is a positive step, the majority of low-income households rely on other heating sources and [average Canadian low-income expenditures are highest on electricity](#).

We suggest that a federal low-income energy efficiency program prioritize the “gap filling” areas noted above, and then encourage more provincial low-income energy efficiency through the utility system by linking federal funds to the adoption of EERS. A sub-target within each EERS should include minimum budgets spent on low-income, Indigenous populations and other traditionally under-resourced communities and/or minimum savings targets. For example, Nova Scotia’s [2023-2025 demand side management plan](#) calls for 20% of the total budget to be spent on low-income and Indigenous communities.

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Electricity Savings Targets

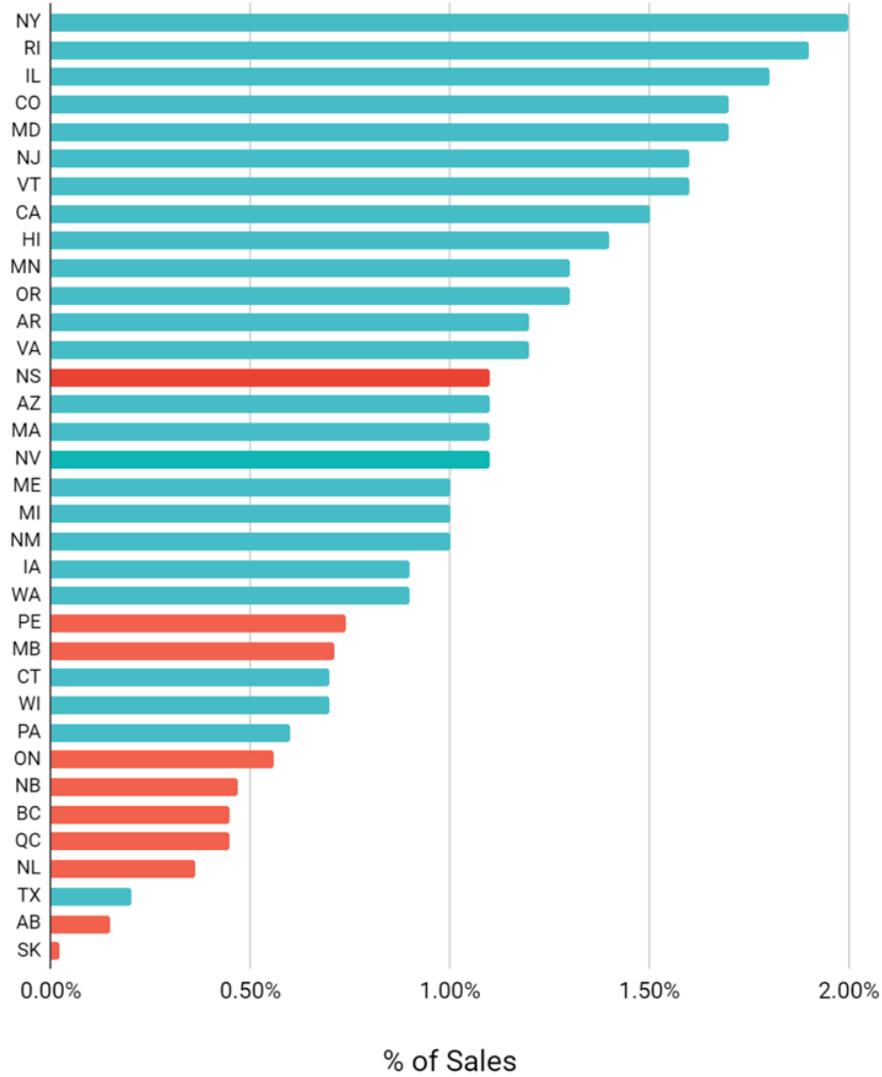


Figure 1. *North American average annual electricity savings targets as a percentage of annual forecasted sales over the planning period (red bars indicate Canadian provinces; excludes jurisdictions that did not report or reported no savings target).*



2021 Incremental Electricity Savings

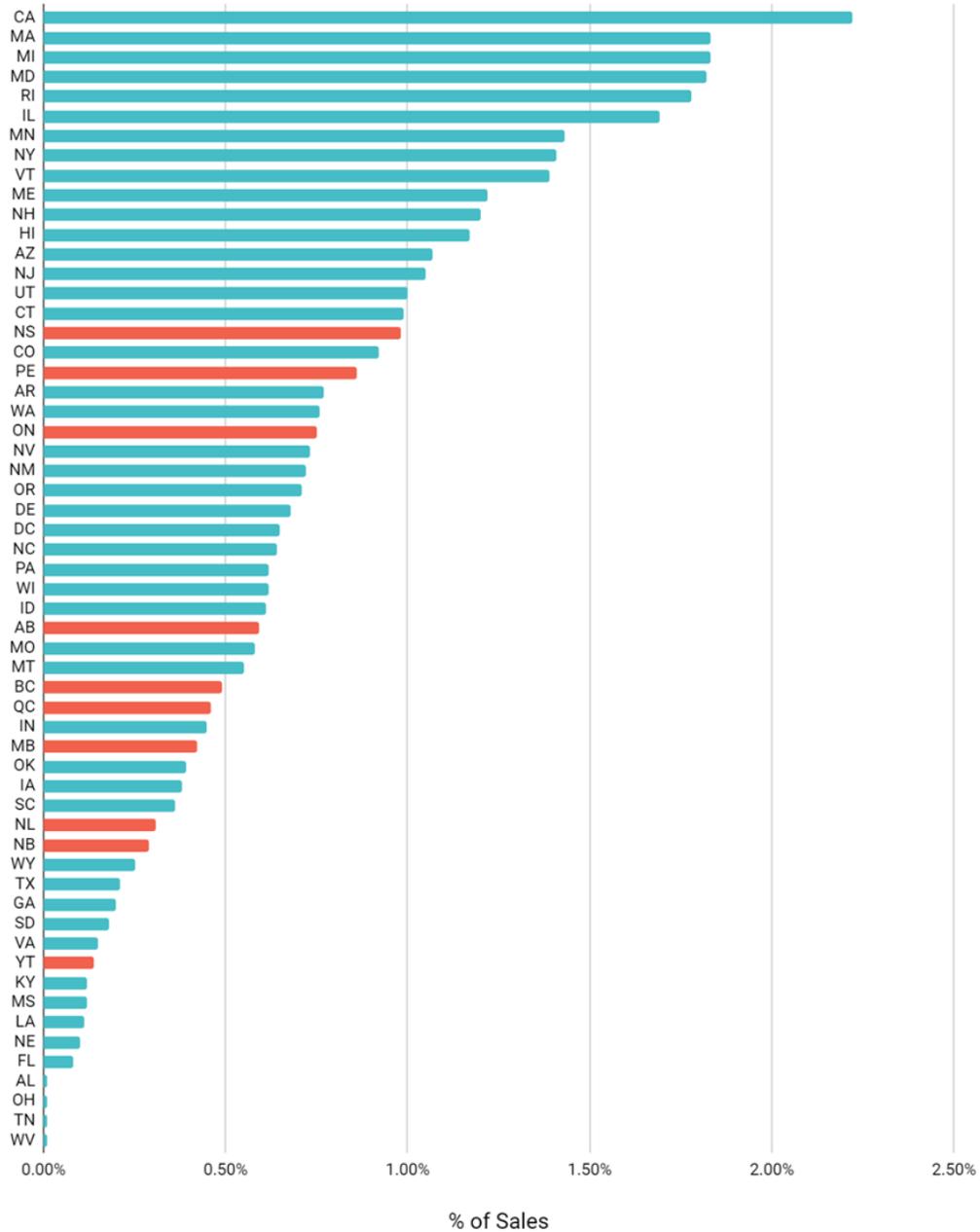


Figure 2. North American incremental electricity savings as a percentage of domestic sales, 2021 (red bars indicate Canadian provinces; excludes jurisdictions that did not report or reported no savings).

