

2023

Energy Efficiency Programs Update

Provinces and Territories

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**Efficiency
Canada**

**Carleton
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About Efficiency Canada

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.

Summary

Efficiency Canada has produced the Canadian Energy Efficiency Scorecard annually since 2019. In it, we assess provincial and territorial energy efficiency policy and program outcomes. In 2022, we chose to change the frequency of the Scorecard production to a biennial schedule. The subsequent publication of the full Scorecard will be in 2024.

It is important to us to continue tracking annual energy efficiency program outcomes in Canada and providing resources to policymakers and energy efficiency professionals. We have thus decided to produce an interim report in this “non-Scorecard year” that provides up-to-date provincial and territorial program outcome data.

This report captures quantitative data on annual (i.e., 12-month) program outcomes realized by program administrators between October 1, 2021 and March 31, 2023. This assessment window allows us to accommodate calendar and fiscal reporting periods. Program performance results are attained from two sources: annual demand-side management reporting, and/or information requests issued to provincial government representatives, utilities, and energy efficiency program administrators. For certain performance metrics, we also use publicly available datasets, provided by government agencies such as Statistics Canada and Natural Resources Canada (NRCan), to normalize the data. The report follows roughly the same structure as the Energy Efficiency Programs chapter of the Scorecard. We estimate provincial and territorial net incremental electricity and natural gas and non-regulated fuel program savings and savings targets; and portfolio spending, including spending on low-income and Indigenous programs.

Our interim annual Programs Update does not score or rank jurisdictions on their program outcomes, nor do we discuss jurisdictional strengths and opportunities for improvement.

The results show that national natural gas/non-regulated fuel savings fell by ~8% year-over-year while electricity savings fell by ~5%. National-level program spending

increased ~8% year-over-year to \$1,226M. Total net incremental electricity savings and natural gas/non-regulated fuel savings as a percentage of sales/end-demand remain relatively unchanged from 2021.

We modified our presentation of saving target metrics to give a better illustration of trends and duration of energy efficiency targets across program administrators in Canada.

Introduction

Efficiency Canada has produced the Energy Efficiency Scorecard annually since 2019. Within it, we evaluate provincial and territorial energy efficiency policies and outcomes from the previous calendar/fiscal year. After Scorecard 2022, Efficiency Canada changed the frequency of the Scorecard production to a biennial schedule. The next publication of the Scorecard will be in 2024.

Tracking the progress of energy efficiency programs across Canada remains an important part of our work. It allows us to stay up to date on energy efficiency trends across the country and to provide a resource to inform and inspire leadership amongst policymakers and energy efficiency professionals. We have thus decided to produce this interim report between Scorecard production years to report on the progress of provincial and territorial energy efficiency program outcomes.

The report follows roughly the same structure as the Energy Efficiency Programs chapter of the Scorecard. We estimate a variety of quantitative metrics including provincial and territorial net incremental electricity and natural gas and non-regulated fuel program savings and savings targets; and portfolio spending, including spending on low-income and Indigenous programs. We do not score or rank jurisdictions on their program outcomes, nor do we discuss jurisdictional strengths and opportunities for improvement.

In the following sections, we share insights into our methods for collecting information on energy efficiency program metrics, our approach to normalizing this information across highly varied provinces with unique energy system contexts, and principles guiding the production of this report.

Methodology

Program performance results are attained from two sources: annual demand-side management reporting, and/or information requests issued to provincial government representatives, utilities, and energy efficiency program administrators. For certain

performance metrics, we also use publicly available datasets, provided by government agencies such as Statistics Canada and Natural Resources Canada (NRCan), to normalize the data.

The information request allows us to gather quantitative data at the program level (e.g., a list of programs, savings, spending, and targets). We distributed the respective program workbooks to different contacts in each province, though in some instances provincial respondents worked together to return a joint workbook.

Respondents returned completed program workbooks through September and October 2023, and we compiled, analyzed, and evaluated them as we received them. We sent information requests to government representatives, utilities, and third-party program administrators across ten provinces and one territory (see Appendix A for a list of respondents). We circulated a draft report with the initial findings to workbook respondents in October 2023 for an accuracy check, and then revised the report based on this feedback and prepared the final report for release in December 2023.

For program administrators unable to return a completed information request in the allotted time frame, we instead derived data from public utility and administrator reporting where possible. Please note that although some administrators were unable to provide program outcomes data, this does not mean they did not achieve energy efficiency program results over the 12-month reporting period.

Period covered

While the production year of this report is 2023, we capture energy efficiency program performance in the most recent year (12 months) for which complete data is available. Program administrators report results on either a calendar or fiscal year basis. Fiscal year reporting periods are most commonly from April 1, 2022, to March 31, 2023, though one program administrator reported on a fiscal year of October 1, 2021 to September 2022.

In cases where we obtained data from third parties, we used the latest information available or over a series of years that best fit the context of the metric being tracked.

For instance, some information came from the 2021 Canadian Census, energy end-use demand data for natural gas is from 2022, and end-use data for non-regulated fuels is from 2021.

Scope and limitations

We focus on provincial and territorial energy efficiency program outcomes by measuring program performance, not overall energy intensity. This report is different from the Scorecard in that it estimates quantitative provincial and territorial program outcome data only; it does not track qualitative aspects of energy efficiency policies and programs.

For this report, we sent program workbooks to respondents that provided data for the previous year's Scorecard. The results may not fully indicate all program activity at the provincial and territorial level in Canada and do not include results from federally administered programs. This report also does not include data from the Northwest Territories, Nunavut or small municipal utilities. We did not acquire updated information for any programs that may be administered by the governments of British Columbia, Alberta, and Newfoundland and Labrador.

Programs results

Energy efficiency programs secure energy savings through various strategies such as audits, retrofits, training for building tradespeople, “people-centred”

¹ or behavioural efficiency strategies, and customized industrial programs. Natural gas and electric utilities, governments and government agencies, and energy efficiency utilities or third parties such as Efficiency Nova Scotia, Efficiency Manitoba and efficiencyPEI administer these programs.²

These entities generally develop and deliver programs under a regulatory framework that recognizes efficiency as an energy-system resource on par with power plants, wind turbines, transmission lines, and similar infrastructure. Efficiency resources, however, often provide energy services at a much lower cost and risk than new sources of supply,³ and deliver numerous co-benefits such as improved comfort, more income in the local economy, and reduced energy poverty.

In this report, we estimate provincial and territorial energy efficiency program data for the following metrics:

- **Program savings**
 - Net annual incremental savings from electricity efficiency programs
 - Net annual incremental savings from natural gas and/or non-regulated fuels efficiency programs
 - Electricity capacity
- **Program spending**
 - Efficiency program portfolio spending per capita, all fuels
- **Supporting equity and inclusion**
 - Low-income program spending
 - Indigenous program spending

- **Efficiency resource planning**

- Electricity savings targets
- Natural gas / non-regulated fuels savings targets

Canada-wide savings and spending

Total energy savings in 2022 amounted to 19.5 petajoules (PJ), a ~7% decline from the previous year's savings of 20.9 PJ (see Figure 1). The largest change was in natural gas savings which fell ~8% from 8.9 PJ to 8.1 PJ while electricity savings fell by ~5% year-over-year from 11.3 PJ to 10.7 PJ.

National-level spending on energy efficiency programs continued to rebound in 2022. Total program spending in 2022 (\$1,226M) surpassed previous 2018 peak spending (\$1,218M) by <1% and increased year-over-year by ~8% (see Figure 2). The largest increase in spending between 2021 and 2022 comes from electricity programs, which increased by ~24% (from \$419M to \$518M). The largest total spending increases came from Québec (\$74M), Ontario (\$29M) and New Brunswick (\$29M). We have classified multi-fuel spending as spending on programs for which we are not able to distinguish the proportion of spending that is attributed to a specific energy type. This may be the case where a program administrator works across energy types.

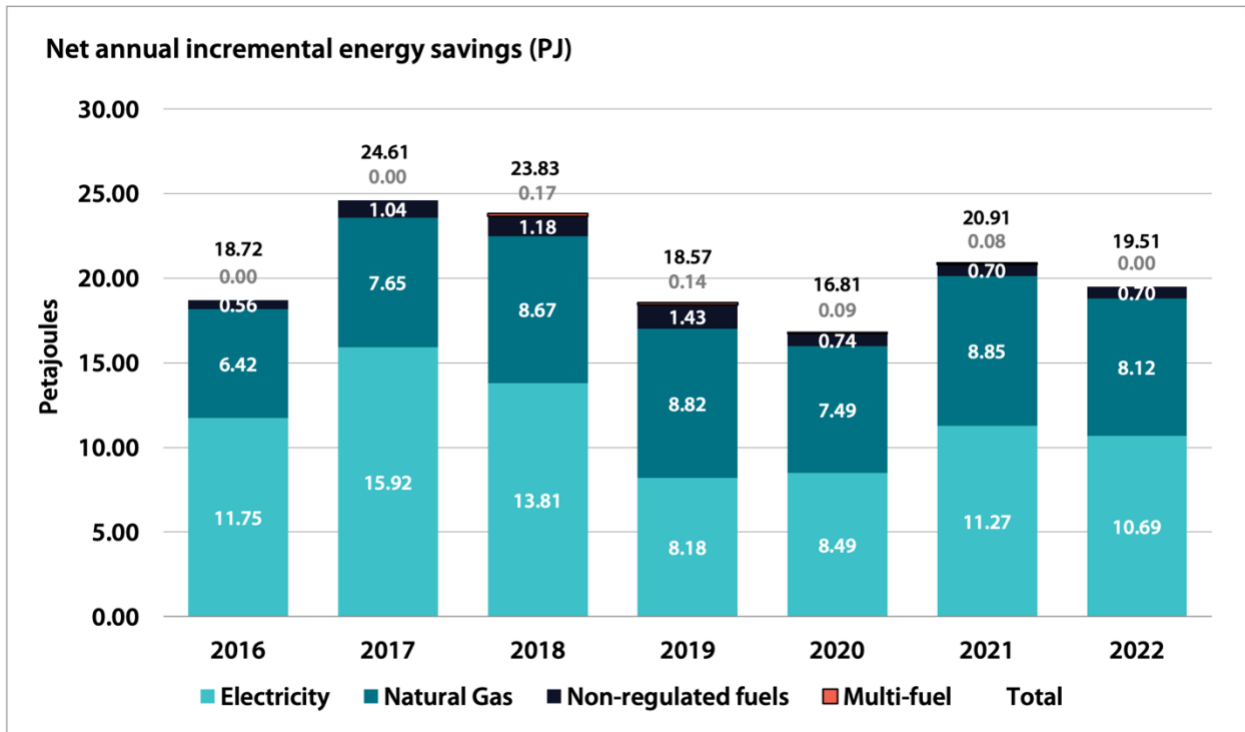


Figure 1. Net annual incremental energy savings (PJ), 2016-2022

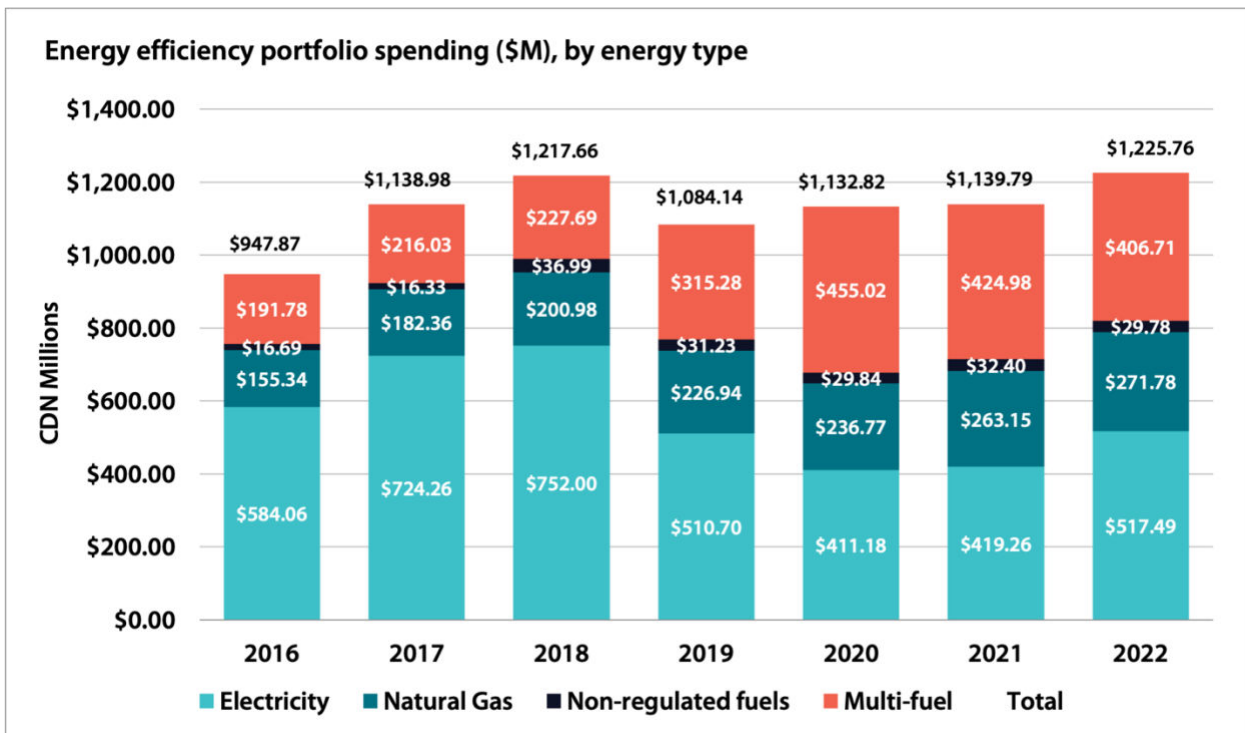


Figure 2. Energy efficiency program spending (\$CAD millions), 2016-2022

Program savings

In this report, we estimate net incremental energy savings from electricity, natural gas and non-regulated fuel (e.g., propane, heating oil, wood) programs, and electricity capacity savings and resources from programs and other demand-side management activities across Canada.

Incremental savings are those realized in the year a program was run and exclude cumulative savings from measures undertaken or installed in previous years. “Net” savings refer to those directly attributable to program activities, including “spillovers” that can occur when program activities promote greater participation, and exclude savings from free riders or weather.⁴

Incremental savings estimated below exclude savings from related activities, which include codes and standards, rate design, distributed generation or load displacement, innovation and research and development, transportation fuel savings programs, and demand response. For electricity savings reported at the generation level, we adjusted figures using the average line loss factor provided by respondents to convert savings to the meter level. In instances where respondents only reported gross savings, we adjusted figures using Canadian average net-to-gross ratios of 87.2% for electricity, 82.8% for natural gas, and 80.2% for non-regulated fuel savings (based on estimates from data received from respondents).⁵

Electricity efficiency programs

The electricity savings metric is calculated as net annual incremental electricity savings at the meter level as a percentage of domestic electricity sales.

Province/ territory	Savings (GWh)	Domestic end-use sales (GWh)	Savings % of domestic sales	2021-2022 % Points change
PE*~	22.49	1,488.03	1.49%	0.63%
NS	112.65	10,456.00	1.07%	0.09%
ON	887.75	130,831.61	0.67%	-0.08%
QC	963.35	180,560.00	0.53%	0.07%
BC	283.87	57,801.00	0.49%	0.00%
NB	60.91	13,315.00	0.46%	0.17%
MB	97.00	22,667.00	0.43%	0.01%
YT~	1.65	502.48	0.33%	0.19%
NL	30.72	9,324.60	0.33%	0.02%
AB	18.26	44,066.50	0.04%	-0.55%
SK	0.00	23,818.00	0.00%	0.00%
National total	2,478.66	494,830.20	0.50%	-0.03%

Table 1. Net incremental electricity savings (2022)

* 2022 sales figures with 1% load growth assumed; PE sales are an estimate based on recorded MECL sales as 90% of provincial total.

~ Some gross savings converted to net savings using estimate of 0.872 NTG

We derived savings and sales data from the program administrator's annual reporting and/or utility regulatory documents, as well as through our information requests to utilities and program administrators. Figures do not include data from smaller utilities. If provided, values for previous years' savings are updated with revised values from our information requests. We provide a list of program administrators reporting savings and sales in Appendix A, and savings data in GWh per program administrator in Appendix B.

Total net annual incremental electricity savings as a percentage of sales saw a small decrease (0.53% in 2021 vs 0.50%) in 2022. Prince Edward Island saw the largest increase in savings as a percentage of sales (0.63%). The lower savings rate observed

in Alberta is largely due to the absence of program savings from programs previously administered by the provincial government.

Natural gas and/or non-regulated fuels efficiency programs

This report combines program savings from natural gas and non-regulated fuels (NRFs) such as heating oil, propane, diesel, and wood into a single metric. Atlantic provinces use very little natural gas in buildings, and as such do not typically operate programs targeting natural gas savings (the exception being New Brunswick). Conversely, other Canadian provinces use proportionally much fewer NRFs than the Atlantic provinces. Combining natural gas and non-regulated fuels into a single metric allows us to compare provinces with different contexts.

This metric is calculated by combining natural gas and non-regulated fuels' annual incremental savings by province (in Terajoules) and dividing them by distribution deliveries of natural gas (residential, commercial/institutional, and industrial) and end-use demand for select non-regulated fuels (diesel fuel oil, natural gas liquids, light fuel oil, and wood/wood pellets) in the residential, commercial, public administration, and industrial-manufacturing end-use sectors.⁶ The savings figures provided below include any savings from fuel switching toward lower carbon fuels.

Province / territory	Natural gas + NRF savings (TJ)	End-use demand (2021) (TJ)	% of Demand	2021-2022 % Points change
PE*	131.23	5,061.30	2.53%	1.93%
QC*	2,769.74	374,409.43	0.73%	-0.01%
YT*	4.95	873.00	0.56%	-2.77%
NS	192.49	36,632.09	0.52%	0.05%
NB	110.51	21,705.07	0.51%	0.21%
BC	1,097.96	263,266.96	0.42%	-0.01%
MB	329.84	98,145.40	0.34%	-0.08%
ON~	2,988.39	1,203,772.09	0.25%	-0.06%
AB*	926.39	388,229.73	0.24%	0.02%
SK	36.93	88,603.16	0.04%	0.00%
NL	-	18,836.32	-	-
National total	8,588.43	2,499,534.55	0.34%	-0.04%

Table 2. Net incremental natural gas and non-regulated fuel savings (2022)

* Net savings for some respondents estimated using 0.828 and 0.802 net-to-gross ratios for natural gas and non-regulated fuels, respectively

~ We note Ontario natural gas programs have a low net-to-gross ratio compared to other jurisdictions. Gross savings were 0.61% of natural gas distribution deliveries in 2022.

We derived savings data from information requests to utilities and program administrators, and supplemented or verified the data via annual reports, utility regulatory documents, or other documents, and may not reflect true provincial totals (e.g., some smaller utilities are not included).

If provided, values for previous years' savings are updated with revised values from our information requests. A list of program administrators reporting savings is provided in Appendix A. We report savings data in gigajoules per program administrator in Appendix C.

Total net annual incremental natural gas and non-regulated fuel savings as a percentage of end-demand saw a slight decline year-over-year (0.38% in 2021 vs 0.34% in 2022). Prince Edward Island saw the largest increase year-over-year, with a net annual incremental savings rate of 2.53% of end-use demand. This jump in savings is

due, in large part, to non-regulated fuel savings from recently launched programs supporting water heater, heat pump, and insulation upgrades.

Electricity capacity

Whereas energy savings are the reduction in the actual amount of energy consumed by a measure over a given period (and thus measured by energy content, e.g., megawatt hours), capacity savings are a reduction in the demand for energy at a specific time (and are thus measured in megawatts), usually having the greatest value during peak periods or periods when electricity supply drops.

Energy efficiency programs deliver both energy savings and capacity savings. In Canada, some systems anticipate, or are experiencing, capacity constraints even though they experience bulk energy surpluses. Some regions are also aggressively deploying electric heat pumps, which can create peak power demands that demand-side strategies can manage. Like energy savings, capacity savings are a resource that helps reduce system costs, avoid outages, and enable utilities to defer or avoid investment in new supply or distribution infrastructure. Utilities can undertake other demand-side management activities to secure additional capacity resources that may be called upon during periods of high energy demand. However, these may not lead to any reductions in energy consumption.

For this report, we asked respondents to delineate electricity capacity savings from efficiency programs and capacity resources available from other demand-side management sources (such as demand response programs, or interruptible rates), and to provide the annual peak demand. Table 3 provides capacity savings from efficiency programs and capacity resources from other demand-side activities separately, as percentages of peak demand.

Province / territory	Efficiency programs	Other demand-side management activities	Total capacity savings	
			2022	2021-2022 % Points change
MB	0.32%	4.50%	4.81%	-0.23%
ON~	0.42%	3.84%	4.26%	0.26%
SK	-	2.02%	2.02%	0.21%
NL*	0.95%	0.91%	1.86%	0.09%
PE~	1.52%	-	1.52%	0.59%
NS	1.41%	0.00%	1.41%	0.02%
NB	0.56%	0.14%	0.70%	0.28%
BC*	0.38%	0.09%	0.47%	0.00%
AB~	-	0.03%	0.03%	-0.02%
QC	-	-	-	-
YT	-	-	-	-

Table 3. Capacity resources (2022)

* For jurisdictions with two or more electricity utilities reporting capacity savings, we estimate this metric based on the utility reporting higher savings (Newfoundland Power and BC Hydro)

~ We obtained peak demand data for AB, ON, and PE from the following respective reports: Alberta Electric System Operator's Annual Market Statistics Report; Maritime Electric's 2020 Integrated System Plan; Ontario Energy Board's Electricity Utility Yearbook⁷

Program spending

The Scorecard tracks program spending, as well as savings. While spending coincides with savings, the addition of a spending indicator picks up on several other factors. For instance, jurisdictions with higher spending could be going after more expensive and difficult-to-reach energy savings. Program administrators could be engaging in activities like codes and standards advocacy, market transformation, and innovation (termed “enabling/supporting” below) that are not recorded in energy savings figures. Jurisdictions might also have different evaluation protocols that result in different savings figures, and thus tracking spending helps control for those differences.

We report spending on a per capita basis. While we have in the past also reported spending on a per-end-use energy demand basis to control for any potential bias that could be introduced by either measure, the differences between these two indicators are minor and per capita spending is the most intuitive. Thus, we only report per capita spending.

Province / territory	Efficiency programs (\$M)	Enabling / supporting (\$M)	Total spending (\$M)	Total spending per capita	2021-2022 change in spending per capita (\$)
YT	\$10.09	\$0.11	\$10.20	\$232.01	<i>\$103.46</i>
PE	\$30.68		\$30.68	\$177.64	<i>\$92.37</i>
NB	\$53.26	\$5.44	\$58.70	\$71.52	<i>\$33.99</i>
NS	\$68.30	\$3.20	\$71.50	\$69.35	<i>\$0.77</i>
QC	\$386.31	\$36.92	\$423.23	\$48.36	<i>\$7.90</i>
BC	\$137.87	\$53.69	\$191.56	\$35.68	<i>-\$15.41</i>
MB	\$35.83	\$11.05	\$46.87	\$33.00	\$4.75
ON	\$333.40	\$27.96	\$361.35	\$23.68	<i>\$1.38</i>
NL	\$6.02	\$1.09	\$7.11	\$13.45	<i>-\$0.56</i>
SK	\$6.50	\$1.92	\$8.42	\$6.98	<i>\$2.35</i>
AB	\$13.12	\$3.01	\$16.13	\$3.51	<i>\$0.09</i>
National total	\$1,081.37	\$144.39	\$1,225.76	\$31.26	<i>\$1.66</i>

Table 4. Spending on efficiency programs and enabling/supporting activities, per capita (2022)

National-level spending on energy efficiency programs and enabling and supporting activities increased by \$90.48M from 2021 to 2022 (7.97%). All but two jurisdictions saw an increase in spending year-over-year. The largest increases in spending per capita were in the Yukon, Prince Edward Island and New Brunswick.

Equity and inclusion

Improving energy efficiency provides many more benefits than reducing the costs of energy systems – it improves living standards and comfort and, by extension, physical and mental health. Efficiency also reduces customer bills and pollutants associated with energy use, which provides indoor and outdoor environmental benefits. All these benefits – reduced consumer costs, coupled with improvements in health, thermal comfort, and well-being – are particularly beneficial to people from traditionally marginalized communities due to low-income or settler colonial policies that negatively impact Indigenous Peoples.

Unfortunately, not all communities can enjoy these benefits equally. Barriers such as the upfront cost of the improvements, split incentives (e.g., between a building owner and its tenant), skepticism of governments or utilities that administer efficiency programs, and accessibility (in cases of remote communities, or where language barriers exist) may push energy efficiency improvements out of reach in some communities. While programs targeting traditionally underserved and hard-to-reach customers yield larger benefits, realizing them is often more capital-intensive and requires different outreach and engagement strategies. However, governments and energy efficiency program administrators across Canada must ensure that all may equally and inclusively share in the benefits that energy efficiency can provide.

Low-income program spending

Energy poverty exists when high energy bills lead to inadequate energy services and social exclusion, preventing some households from gaining access to other necessities of life.⁸ Our understanding of energy poverty is expanding, especially as we consider how to ensure all households can move toward net zero emission standards, and households that might not pay an energy bill still experience inadequate energy services and vulnerabilities to negative health, extreme heat and extreme cold.

We calculate this metric by benchmarking low-income program spending data against population data of individuals below the low-income measure (before tax) (LIM-BT) thresholds from the 2021 census.⁹

We wish to emphasize the primary objective of energy efficiency programs should be to eliminate low-income barriers to accessing energy efficiency, and many of these barriers exist beyond Canadian low-income thresholds, which is why several programs define eligibility above typical low-income cut-offs.¹⁰ The low-income measure presents a relatively expansive definition of low income, comparable across jurisdictions, representing Canadians most in need. Programs might have eligibility requirements above this level because they recognize low-income barriers relevant for low-to-moderate-income Canadians in their jurisdiction.

Province / territory	Program spending (\$ millions)	Spending per individual (LIM-BT)	2021-2022 Change in spending per individual
PE	\$17.55	\$690.40	\$457.84
NB	\$24.52	\$177.61	\$147.19
NS	\$14.10	\$80.17	-\$11.43
BC	\$18.04	\$27.09	\$4.59
MB	\$5.56	\$24.12	\$9.37
ON	\$37.23	\$20.34	-\$11.09
SK	\$1.04	\$5.52	\$3.03
NL	\$0.31	\$3.18	-\$7.53
QC	\$2.44	\$1.93	\$0.70
AB	-	-	\$0.00
YT	-	-	-\$7.82
National total	\$120.78	\$23.58	\$3.04

Table 5. Low-income efficiency program spending (2022)

National-level low-income energy efficiency program spending increased by 14.8% year-over-year (from \$105.23M to \$120.78M). This equates to approximately \$3 more spending per low-income person across Canada. New Brunswick and Prince Edward Island significantly increased spending on low-income programs.

Indigenous communities

Indigenous communities are using energy efficiency to achieve objectives such as greater energy sovereignty, local security, and economic well-being.¹¹ The Pan-Canadian

Framework on Clean Growth and Climate Change (PCF) calls for the federal and provincial governments to work in partnership with Indigenous Peoples to improve building standards and energy efficiency through building-renovation programs, in a manner that incorporates traditional knowledge and culture into building designs.¹² A specific focus on fostering Indigenous partnerships within energy efficiency policy strategies can be a pathway towards reconciliation, which is the responsibility of all Canadians.¹³ Indigenous-specific energy efficiency programs can build relationships with specific Nations and/or outreach to urban communities through organizations such as Friendship Centres.

Energy efficiency portfolios should include a specific focus on working with relevant Indigenous Nations, for several reasons. The United Nations Declaration on the Rights of Indigenous Peoples outlines the Indigenous right to free, prior, and informed consent for any energy project that impacts Indigenous Nations or their territories, including energy efficiency projects. In addition, policy approaches in support of Indigenous housing have historically proven inadequate and often counterproductive. As of 2020, Indigenous people in Canada were three times more likely (16.4%) than the non-Indigenous population (5.7%) to live in a dwelling in need of major repairs.¹⁴ Previous government-directed housing initiatives that did not include meaningful partnerships with Indigenous Peoples, failed to build housing that fit local community needs for operational affordability and upkeep, taking into account local climatic and demographic contexts.¹⁵

This report estimates Indigenous-specific energy efficiency program spending as a performance indicator to evaluate the emphasis provincial-level energy efficiency program portfolios place on improving energy efficiency in Indigenous communities. To estimate spending across provinces, we divide total spending reported in our information request by the number of individuals in each province reporting “Indigenous identity” in the 2021 census.¹⁶

We note that this is a spending metric for the entire provincial Indigenous population, not a spending amount per program participant and thus, it is not a measure of the comprehensiveness of energy retrofits.

Some important caveats: This metric only provides a partial view of Indigenous energy efficiency initiatives in Canada, as it only assesses provincial and/or program administrator spending. For instance, this approach would not capture Indigenous-led projects taking place without partnerships with provincial government agencies or program administrators.¹⁷ We are also not capturing all energy efficiency upgrades supported by the federal government that do not involve a provincial-level government or utility partner. Furthermore, some program administrators note Indigenous people may also benefit from income-targeted programming. The kinds of programs assessed in this metric are those specifically for Indigenous peoples or communities, which we suggest is a best practice to ensure programs partner with Indigenous Nations and help meet community needs and aspirations.

Province / territory	Indigenous program spending (\$ millions)	Indigenous program spending per individual with Indigenous identity	2021-2022 Change in spending per individual
PE	\$0.29	\$86.28	<i>\$73.28</i>
NS	\$3.00	\$57.22	<i>\$8.58</i>
BC	\$2.90	\$9.99	<i>-\$10.58</i>
SK	\$1.33	\$7.09	<i>\$6.56</i>
MB	\$0.98	\$4.13	<i>\$2.11</i>
ON	\$1.61	\$3.96	<i>-\$0.81</i>
AB	-	-	<i>\$0.00</i>
NB	-	-	<i>-\$9.61</i>
NL	-	-	<i>\$0.00</i>
QC	-	-	<i>-\$0.29</i>
YT	-	-	<i>-\$79.46</i>
National total	\$10.12	\$5.76	<i>\$1.25</i>

Table 6. Indigenous peoples efficiency program spending (2022)

Energy savings targets

Energy efficiency targets give program administrators and energy system managers clear direction. They reinforce the concept of efficiency as a quantifiable energy resource, the potential size of which can be identified in advance (i.e., through resource planning), and then pursued through a portfolio of energy efficiency programs and related activities. The core objective of an energy savings target is to achieve higher savings than would have otherwise been accomplished in its absence. If legislated or rooted in a concrete and actionable energy/climate change plan, they also communicate political support for energy efficiency.

In this report, we look at provincial and territorial electricity and natural gas and/or non-regulated fuels energy savings targets which program administrators are aiming to achieve (i.e., not targets based on economy-wide energy intensity). These targets are set by the utility or program administrator and/or negotiated and approved as part of a demand-side management planning process with a planning cycle period of two to five years.

Aside from a select few provinces with legislated targets, program administrators in most jurisdictions in Canada operate similarly. A program administrator or utility first proposes energy efficiency savings targets and associated spending budgets to the regulatory board as part of a demand-side management plan that usually covers three to five years. The regulator and intervening stakeholders then assess the plan to consider issues such as cost-effectiveness, rate and bill impacts, and social equity. After a period of quasi-judicial review by the board and potential negotiation with intervening parties, the regulator approves a plan. Each year, the program administrator or utility reports progress on achieving these plans to the regulatory board, and/or sometimes a provincial government ministry, for oversight and approval.

In our Scorecard reports, we have historically assessed these plans by evaluating the targeted net annual incremental energy savings as a percentage of projected domestic sales (averaging both over the planning period reported by the program administrator). These targets aim to achieve program-level savings, and in cases where multiple

utilities are offering the same energy service, are a combined average for the province/territory. This approach is necessary for benchmarking at the provincial/territorial level and for scoring purposes.

In this report, we include additional information to better illustrate trends across Canada (see Table 7 and Table 8). We provide both targeted annual energy savings per respective program administrator (as a percentage of the administrator's projected annual sales) as well as provincial/territorial annual targets (the combined average of program administrators in the case where multiple utilities offer the same energy service). We provide a five-year timeline of targets which demonstrates the duration of targets. We also include targets in parentheses where administrators have set a target at the demand-side portfolio level (i.e., a target which includes savings from rates, distributed generation, codes and standards, etc.).

Electricity savings targets

Table 7 shows savings target percentages for energy efficiency programs. Values in parentheses include savings targets from other demand-side management activities, such as rates, demand response programs, and codes and standards work.

Province / territory	Program administrator	2023	2024	2025	2026	2027	Avg
NS	Efficiency Nova Scotia	0.98%	1.17%	1.23%	-	-	1.13%
ON	IESO	0.91%	1.20%	-	-	-	1.05%
PE*†	efficiencyPEI	0.83%	0.71%	0.73%	-	-	0.76%
MB*‡	Efficiency Manitoba	0.67% (1.48%)	-	-	-	-	0.67%
	Combined	0.57%	0.61%	-	-	-	0.59%
BC	BC Hydro	0.41% (1.06%)	0.50% (1.12%)	-	-	-	0.46%
	FortisBC	0.72%	0.72%	0.74%	0.76%	0.79%	0.75%
NB	NB Power	0.49%	0.55%	0.60%	0.65%	-	0.57%
QC	Hydro-Québec	0.41%	0.46%	0.45%	0.44%	0.44%	0.44%
	Combined	0.25%	0.24%	0.24%	-	-	0.24%
NL	NFLD Power	0.47%	0.46%	0.46%	-	-	0.46%
	NFLD Hydro	0.03%	0.02%	0.02%	-	-	0.03%
AB	Emissions Reduction Alberta	0.12%	0.07%	-	-	-	0.10%
SK	SaskPower	-	-	-	-	-	-
YT	Yukon Government	-	-	-	-	-	-
Average target		0.55%	0.60%	0.60%	0.62%	0.61%	0.58%

Table 7. Electricity programs savings targets

Note: Values in parentheses include savings targets from other demand-side management activities, such as rates, demand response programs, and codes and standards work

** Where load forecasts are unavailable, we assume 1% annual load growth of electricity sales*

† Prince Edward Island's electricity savings targets are pending approval

‡ Targets may differ from Efficiency Manitoba's official target due to a difference in the methodology for estimating electricity sales

Natural gas / non-regulated fuels savings targets

In keeping with our natural gas and non-regulated fuels savings metric above, we combined targets for natural gas and non-regulated fuels from energy efficiency programs. Values in parentheses include savings targets from other demand-side management activities, such as rates, demand response programs, and codes and standards work. We used the same natural gas/non-regulated fuels denominator as in the savings metric above but assumed no load growth (due to observed flat or declining demand in non-regulated fuels).

Province / territory	Program administrator	2023	2024	2025	2026	2027	Avg
NS	Efficiency Nova Scotia	0.96%	0.98%	1.10%	-	-	1.01%
NB	NB Power	0.71%	0.94%	0.56%	0.60%	-	0.70%
BC	FortisBC Energy	0.61%	-	-	-	-	0.61%
QC	Énergir	0.55%	0.55%	0.56%	-	-	0.55%
MB‡	Efficiency Manitoba	0.43% (0.51%)	-	-	-	-	0.43%
ON*	Enbridge	0.25%	0.36%	0.37%	-	-	0.33%
AB	Emissions Reduction Alberta	0.29%	-	-	-	-	0.29%
SK	SaskEnergy	0.07%	0.07%	0.07%	0.07%	0.07%	0.07%
NL	-	-	-	-	-	-	-
PE	efficiencyPEI	-	-	-	-	-	-
YT	Yukon Government	-	-	-	-	-	-
Average target		0.49%	0.58%	0.53%	0.33%	0.07%	0.50%

Table 8. Natural gas and non-regulated fuels programs' savings targets

Note: Values in parentheses include savings targets from other demand-side management activities, such as rates, demand response programs, and codes and standards work

** The Ontario Energy Board expects that Enbridge's long-term natural gas savings targets will be equivalent to a minimum of 0.6% in 2026, 0.8% in 2027 and 1.0% per year from 2028 through 2030, relative to the prior year's sales.¹⁸*

‡ Targets may differ from Efficiency Manitoba's official target due to a difference in the methodology for estimating natural gas and non-regulated fuel end-use demand

Conclusion

We produced this interim report between Scorecard production years to track the progress of provincial and territorial energy efficiency program outcomes. We aim to stay up to date on energy efficiency trends across the country and to provide a resource to policymakers and energy efficiency professionals.

The report shows that national natural gas/non-regulated fuel savings (PJ) fell by ~8%, while electricity savings (PJ) fell by ~5% year-over-year. National program spending increased by ~8% and low-income program spending increased by ~15% year-over-year. The increase in low-income spending was driven by large jumps in spending in Prince Edward Island and New Brunswick. Total net incremental electricity savings and natural gas/non-regulated fuel savings as a percentage of sales/end-demand remain relatively unchanged from 2021.

Appendix A: information request respondents

In August 2023, Efficiency Canada circulated an information request to government, utility and third-party program administrator representatives. We contacted each representative beforehand to introduce the Programs Update report and confirm their participation. In cases where a completed information request was not returned, we derived data from publicly available sources, such as annual utility reports when possible. In some cases, respondents worked together to return a combined response.

Province / Territory	Respondents
AB	Emissions Reduction Alberta Municipal Climate Change Action Centre (MCCAC)
BC	BC Hydro
MB	Efficiency Manitoba
NB	New Brunswick Power Government of New Brunswick
NL	Newfoundland and Labrador Hydro Newfoundland Power
NS	Efficiency Nova Scotia
ON	Enbridge Independent Electricity System Operator (IESO) Ontario Energy Board (OEB)
PE	efficiencyPEI
QC	Énergir Government of Québec Hydro-Québec
SK	SaskEnergy SaskPower
YK	Government of Yukon

Table 9. Respondents to information request

Appendix B: net incremental electricity savings (GWh)

We show electricity savings at the meter level in gigawatt hours (GWh). Where necessary, we converted generation level savings to meter level using provided line-loss values and gross savings to net using a net-to-gross ratio of 0.872. These are program savings only, excluding savings from codes and standards, rates, demand response, and distributed generation.

Province / Territory	Administrator	2021	2022
AB	Emissions Reduction Alberta	19.00	14.54
	Government of Alberta	219.60	
	MCCAC	6.93	3.72
<i>AB Total</i>		<i>245.53</i>	<i>18.26</i>
BC	BC Hydro	251.40	248.00
	FortisBC	29.65	35.87
<i>BC Total</i>		<i>281.05</i>	<i>283.87</i>
MB	Efficiency Manitoba	94.49	97.00
NB	NB Power	38.49	60.91
NL	Newfoundland and Labrador Hydro	1.54	1.62
	Newfoundland Power	26.90	29.10
<i>NL Total</i>		<i>28.44</i>	<i>30.72</i>
NS	Efficiency Nova Scotia	100.76	112.65
ON	IESO	1,047.00	887.75
PE	efficiencyPEI	12.77	22.49
QC	Hydro Québec	732.50	807.70
	Government of Québec	76.82	155.65
<i>QC Total</i>		<i>809.32</i>	<i>963.35</i>
SK	SaskPower		
YT	Government of Yukon	0.63	1.65
Grand Total		2,658.49	2,478.66

Table 10. Net incremental electricity savings (GWh)

Appendix C: net incremental natural gas and non-regulated fuels savings (TJ)

We show natural gas and non-regulated fuels savings in terajoules (TJ). Savings reported as gross were converted to net using a net-to-gross ratio of 0.828 for natural gas, and 0.802 for non-regulated fuels. Savings reported in Mm3 were converted to TJ using Canadian Energy Regulator conversion factors (1 Mm3 = 37.30 TJ).

Province / territory	Administrator	2021	2022
AB	Emissions Reduction Alberta	111.72	926.39
	Government of Alberta	715.17	
<i>AB Total</i>		<i>826.89</i>	<i>926.39</i>
BC	BC Government	69.90	
	FortisBC Energy	1,084.33	1,097.96
<i>BC Total</i>		<i>1,154.22</i>	<i>1,097.96</i>
MB	Efficiency Manitoba	372.65	329.84
NB	NB Power	81.50	110.51
NS	Efficiency Nova Scotia	218.55	192.49
ON	Enbridge rate zone	3,584.91	1,538.92
	Union Gas rate zone (legacy)		1,449.47
<i>ON Total</i>		<i>3,584.91</i>	<i>2,988.39</i>
PE	efficiencyPEI	47.32	131.23
QC	Énergir	1,571.21	1,914.24
	Government of Québec	1,466.13	855.50
<i>QC Total</i>		<i>3,037.33</i>	<i>2,769.74</i>
SK	SaskEnergy	31.31	36.93
YT	Government of Yukon	21.00	4.95
Grand Total		9,375.68	8,588.43

Table 11. Net incremental natural gas and non-regulated fuel savings (TJ)

Appendix D: electricity capacity

This appendix lists electricity utility capacity savings (MW) from efficiency programs and capacity resources available from other demand-side management sources which may include demand response programs or interruptible rates.

Province / territory	Administrator	2021	2022		2022 total
			Other demand-side management activities	Programs	
AB	MCCAC	5.28	3.53		3.53
BC	BC Hydro	50.70	9.80	42.10	51.90
	FortisBC	13.05			
BC Total		63.75	9.80	42.10	51.90
MB	Efficiency Manitoba	241.12	214.01	15.12	229.13
NB	NBP	14.02	4.78	19.04	23.82
NL	Newfoundland Hydro	0.44		0.44	0.44
	Newfoundland Power	22.14	12.20	12.81	25.01
NL Total		22.58	12.20	13.25	25.45
NS	Efficiency Nova Scotia	27.48		31.35	31.35
ON	IESO	972.69	923.00	101.41	1024.41
PE	efficiencyPEI	2.80		4.73	4.73
QC	Hydro-Québec	1787.00			
SK	SaskPower	70.70	76.80		76.80
YT	Yukon Government				

Table 12. Capacity resources (MW)

Note: For jurisdictions with two or more electricity utilities reporting capacity savings, we estimated this metric based on the utility reporting higher savings (Newfoundland Power and BC Hydro).

Appendix E: energy efficiency program spending

This appendix lists spending on efficiency programs and enabling strategies, innovation or R&D, supporting initiatives, and codes and standards. Spending on related activities, such as rates, distributed generation, or demand response is excluded.

Province / territory	Administrator	2021 Total	2022		2022 Total
			Enabling / supporting	Programs	
AB	Emissions Reduction Alberta	\$7.74		\$9.34	\$9.34
	Government of Alberta	\$0.76			
	MCCAC	\$6.78	\$3.01	\$3.78	\$6.79
AB Total		\$15.28	\$3.01	\$13.12	\$16.13
BC	Government of BC	\$67.49			
	BC Hydro	\$81.48	\$20.19	\$52.91	\$73.09
	FortisBC	\$12.37	\$4.07	\$6.33	\$10.40
	FortisBC Energy	\$106.84	\$29.44	\$78.63	\$108.07
BC Total		\$268.19	\$53.69	\$137.87	\$191.56
MB	Efficiency Manitoba	\$39.27	\$11.05	\$35.83	\$46.87
NB	NB Power	\$29.80	\$5.44	\$53.26	\$58.70
NL	Newfoundland and Labrador Hydro	\$1.76	\$0.23	\$1.13	\$1.36
	Newfoundland Power	\$5.56	\$0.86	\$4.90	\$5.75
NL Total		\$7.31	\$1.09	\$6.02	\$7.11
NS	Efficiency Nova Scotia	\$68.50	\$3.20	\$68.30	\$71.50

NT	Arctic Energy Alliance	\$4.01			
ON	Affordability trust	\$25.15			
	Enbridge rate Zone	\$69.62	\$8.90	\$62.01	\$70.92
	IESO	\$184.87	\$7.26	\$233.14	\$240.40
	Union Gas rate zone (legacy)	\$52.98	\$11.79	\$38.24	\$50.04
ON Total		\$332.62	\$27.96	\$333.40	\$361.35
PE	efficiencyPEI	\$14.15		\$30.68	\$30.68
QC	Énergir	\$28.76	\$1.05	\$35.46	\$36.51
	Hydro-Québec	\$96.60	\$17.50	\$125.10	\$142.60
	Government of Québec	\$224.28	\$18.37	\$225.75	\$244.12
QC Total		\$349.64	\$36.92	\$386.31	\$423.23
SK	SaskEnergy	\$4.95	\$1.92	\$4.33	\$6.25
	SaskPower	\$0.52		\$2.17	\$2.17
SK Total		\$5.47	\$1.92	\$6.50	\$8.42
YT	Government of Yukon	\$5.54	\$0.11	\$10.09	\$10.20
	Grand Total	\$1,139.79	\$144.39	\$1,081.36	\$1,225.76

Table 13. Efficiency program and enabling/supporting spending (\$CAD millions, nominal)

Citations

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² For a discussion of the evolution in program administration, see Brendan Haley et al., “From Utility Demand Side Management to Low-Carbon Transitions: Opportunities and Challenges for Energy Efficiency Governance in a New Era,” *Energy Research & Social Science* 59 (January 2020).

³ Ron Binz et al., “Practicing Risk-Aware Electricity Regulation” (CERES & Regulatory Assistance Project, 2014), <https://www.ceres.org/resources/reports/practicing-risk-aware-electricity-regulation-2014-update?report=view>.

⁴ Free riders are energy efficiency program participants who would have taken energy saving actions on their own without inducement from the program. Spillover refers to additional energy savings that occur because a program participant implements additional measures beyond those targeted by the program, or due to non-participants engaging in energy savings activities because of the program’s influence.

⁵ We calculated NTG values using net and gross figures provided by the following respondents between 2016 and 2019. Electricity: Efficiency Nova Scotia, IESO, Newfoundland Power, Newfoundland and Labrador Hydro, and Energy Efficiency Alberta. Natural gas: Énergir, SaskEnergy, and Energy Efficiency Alberta. Non-regulated fuels: Energy Efficiency Alberta. We excluded Enbridge-provided net and gross values from the natural gas calculation as outliers (averaging 43.9% between 2016 and 2018).

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