



**Efficiency
Canada**



Carleton
UNIVERSITY

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

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

By: Efficiency Canada

September 28, 2022



List of Recommendations

Recommendation 1: That the Government provide funding in the amount of at least \$2 billion for low-income energy efficiency to reduce energy poverty and prepare low-income households for net-zero emissions, tailored to regional contexts.



Lowering energy costs for those who need it most

Efficiency Canada is a research and advocacy organization housed within Carleton University's Sustainable Energy Research Center that acts as a national voice for an energy efficient economy. We envision a future where Canada uses energy efficiency to its fullest potential. This means maximizing the benefits of energy efficiency to achieve a sustainable environment, a productive economy, and a just and equitable society. We are located on the traditional unceded territories of the Algonquin nation.

This year's federal budget must consider how to help Canadians with the rising cost of living while continuing to take action on climate change to achieve net-zero emissions and reduce fossil fuel use, especially given our economy's vulnerability to future price increases. Energy efficiency is a way to make progress on both objectives and Canada has significant potential to improve outcomes in this area. A recent international Scorecard showed that Canadian residents use the second highest amount of energy per capita amongst the top 25 energy consuming countries.¹

Preparing Canada's building stock to withstand climate impacts and achieve net-zero emissions is a large task. A discussion paper informing Canada's Green Building Strategy notes that retrofitting the entire building stock by 2050 would require annual investments in the \$20 to \$35 billion range.² The public sector must lead these investments by taking on upfront costs and risks to transform markets sufficiently, so the private sector naturally sees green buildings as a productive area for investment and innovation.

In this submission we will emphasize the **urgent need for the federal government to invest in improving energy efficiency for low-to-moderate income Canadians**, who are most likely to experience unaffordable energy bills and/or inadequate energy services such as sufficient access to heating, cooling, and healthy indoor environments.

Investing in low-income energy efficiency in this year's budget will fill a major policy gap that threatens to leave Canadians with lower incomes behind. Furthermore, a low-income efficiency program will put downward pressure on energy prices and create strategic opportunities to attract more people to the skilled trades and to reduce costs in the construction sector.

Recommendation Details

That the Government provide funding in the amount of at least \$2 billion for low-income energy efficiency to reduce energy poverty and prepare low-income households for net-zero emissions, tailored to regional contexts.

The majority of low-to-moderate income Canadians are currently left out of federal energy efficiency and green building policies. The draft paper on Canada's Green Building Strategy makes little to no mention of energy poverty or low-income energy efficiency, and "leaving no one behind" is missing from the plan's themes.³

¹ After normalizing for weather. See Canada drops from 10th to 13th in international ranking on energy efficiency. April 6, 2022 available at <https://www.energycanada.org/canada-drops-from-10th-to-13th-in-international-ranking-on-energy-efficiency/>

² See The Canada Green Building Strategy Discussion Paper <https://www.rncanengagenrcan.ca/en/content/industry-have-your-say>

³ See <https://www.rncanengagenrcan.ca/en/content/industry-have-your-say>



The federal Greener Homes Grant and Loan programs are not a good match for low-income Canadians who cannot pay the up-front costs required to access the incentives or take on additional debt burdens. At least 1.6 million low-income homeowners – representing approximately 6.5% of all Canadian households – are left out.

Federal programs currently support affordable housing upgrades⁴, yet only 1 in 5 renters below Canada’s “official poverty line”⁵ live in a building subsidized by affordable housing providers. Canada’s 2.2 million low-income renters (approximately 27.1% of all private market renters) in private market housing are left out, and will be more vulnerable to extreme heat and cold events as well as unaffordable rents or bills.

On September 15th, 2022, the Minister of Environment and Climate Change announced \$250 million over four years from the Low Carbon Economy Fund, focused on helping low-income homeowners move from heating oil to greener heating sources. This initiative recognizes that a dedicated approach is needed to improve energy efficiency for low-income Canadians and it fills a key gap by encouraging fuel switching. These funds will be focused on Atlantic Canada, restricted to fuel oil users, and potentially neglecting homes in need of significant air sealing, insulation, and other upgrades in addition to new heating systems. Electricity and natural gas usage comprise 90% of low-income energy costs, on average, in Canada.⁶ Thus, the majority of low-to-moderate income households in Canada are still left out of federal policy that only targets fuel oil usage. But, it is now possible to build on this initiative by making energy efficiency accessible to all low-to-moderate income Canadians, regardless of what fuel they use and where they live.

Canada will not meet its net-zero emissions goal without upgrading the buildings where low-income Canadians live. Without a national federal energy efficiency solution, low-income Canadians are vulnerable to rising energy costs due to inflation and carbon taxes. As Canada moves to net-zero emissions, higher income Canadians will be able to escape fossil fuels, leaving lower income Canadians with the burden of paying higher costs for fossil fuel distribution networks.

Long-standing low-income energy efficiency programs at provincial levels and internationally, such as the United States (US) Weatherization Assistance Program, provide no-cost, turn-key upgrades to income qualified households.

An Efficiency Canada published report reviewed existing low-income energy efficiency programs in Canada administered by utilities, crown corporations, and governments.⁷ The report found that existing programs in the market have delivery capabilities that the federal government need not build from scratch. Yet, no program supports energy retrofits comprehensively enough to make a meaningful impact on energy bills or to meet net-zero emission objectives. There are thus key gaps that the federal government can fill that relate directly to reducing costs of living and meeting net-zero emission goals. Federal funds should focus on enhancing existing programs to achieve:

⁴ The Federation of Canadian Municipalities Sustainable Affordable Housing program and the CMHC the National Housing Co-Investment Fund, and new initiatives listed as a low-income stream under the Green Homes Loan Program.

⁵ Based on the Market Based Measure.

⁶ Survey of Household Spending. Lowest income quintile average expenditure per household in Canada, shelter for principal accommodation, available at <https://doi.org/10.25318/1110022301-eng>

⁷ Kantamneni, Abhilash & Brendan Haley 2022. Efficiency for All: A review of provincial/territorial low-income energy efficiency programs with lessons for federal policy. <https://www.energycanada.org/low-income-report/>



1. Deeper energy savings to cut bills
2. Fuel switching to zero-carbon ready fuels to achieve net-zero emissions
3. Removing non-energy barriers that prevent upgrades from happening
4. Targeting the most energy-poor and hard to reach households

Federal funds can encourage co-funding from existing programs if strategically designed to reduce costs in utility regulation cost-benefit calculations, while also improving outreach and removing non-energy barriers that prevent participation.

Polling shows that 72% of Canadians either “strongly support” or “support” government funding to expand low-income energy efficiency. This level of public support is even stronger than the Greener Home Loan program that offers \$40,000 loans. Support is also strong across rural and urban communities, owners and renters, regions, and income levels.⁸

Strategically managing inflation

A low-income energy efficiency program can strategically manage inflation and cost of living pressures by targeting support to those most in need; reducing energy demand; and training new people and better coordinating supply and demand.

First, a low-income energy efficiency program will help those most impacted by the rising cost of living. Deep energy retrofits that reduce energy consumption by 40-70% can lift Canadians out of energy poverty and ensure they do not have to make choices between paying the utility bill or the grocery bill. Targeting energy efficiency to those who need it most is a high impact use of public dollars, in households that will not be served by the private sector. Improving energy efficiency creates society wide benefits through improved health⁹, resilience against extreme heat and cold¹⁰, and maintenance of affordable housing stock.¹¹

Second, energy efficiency reduces energy demand, which can put downward pressure on energy prices, and it will increase Canadian residents’ resilience against any future price shocks.

Finally, we recommend designing federal low-income energy efficiency initiatives to help manage inflationary pressure in the construction sector. There are numerous opportunities because the particular outreach and administrative requirements for successful low-income programs coincide with solutions that manage labour shortages and supply chain bottlenecks.

⁸ Polling: Canadians support low-income energy efficiency 2022 <https://www.energycanada.org/polling-canadians-support-low-income-energy-efficiency/>

⁹ “Energy efficiency retrofits in buildings create conditions that support improved occupant health and well-being, particularly among vulnerable groups, including improved physical health such as reduced symptoms of respiratory and cardiovascular conditions, rheumatism, arthritis and allergies, as well as fewer injuries” IEA, Multiple Benefits of Energy Efficiency, available at <https://www.iea.org/reports/multiple-benefits-of-energy-efficiency/health-and-wellbeing>

¹⁰ “Designing efficiency interventions to reduce the health effects of extreme temperatures will be key as climate change progresses” Seltnerich, Nate. 2015 “Between extremes: health effects of heat and cold.” Environmental Health Perspectives, Nov; 123(11): A275–A279, available at 10.1289/ehp.123-A275

¹¹ See ‘Advancing Building Retrofits – Tower Renewal Partnership report’ <http://towerrenewal.com/research-reports/advancing-building-retrofits/>



To manage labour shortages, we recommend designing the program to train and employ people from traditionally underrepresented populations to design, administer, and implement the program. This training and employment strategy also facilitates program outreach and participation by building trust in target communities and breaking down language and cultural barriers. This approach will add capacity to the wider retrofit market by increasing the number of skilled tradespeople. We also recommend developing new market infrastructures, such as a database of auditor and installer language capabilities.

A relevant example is the US Weatherization Assistance Program, which requires that a certain percentage of federal program funding be invested in reducing barriers to employment of underrepresented populations through developing formal partnerships with workforce development organizations, labour organizations and unions, trade schools, and technical colleges.

Low-income energy efficiency also presents a unique opportunity to alleviate supply chain bottlenecks. Uncertain and uncoordinated demands create bottlenecks because suppliers are reluctant to invest in training and manufacturing upgrades, and face high costs per sale. All upgrades in a low-income program must be turn-key for households, and are thus best coordinated by a program administrator. This makes it easier to articulate total demands to the market across a large number of buildings. By coordinating retrofits through the program, supply chain actors get advance notice of upcoming market demands. The increased certainty means contractors can invest in training and hiring, and manufacturers can improve production processes. The program can negotiate bulk purchases at lower cost and/or bring new equipment and materials into local markets. It is also possible for program administrators to better time upgrades to coincide with local market conditions.

To manage structural and supply-side driven inflation, we need to enhance productivity and avoid supply-demand mismatches in sectors that need to grow in a net-zero emissions future. A low-income energy efficiency program is well placed to contribute to solving inflationary problems by bringing new people into the skilled trades and related sectors, and by better coordinating retrofit demand to grow sector supply capabilities.

Budget

Retrofitting all buildings housing Canadians experiencing energy poverty could cost over \$100 billion. In 2021, provincial programs spent a total of \$100 million on low-income energy efficiency.¹²

The federal government should dedicate enough funds to demonstrate a long-term commitment that will entice new people to enter the renovation workforce and facilitate partner involvement. The commitment must also be large enough to encourage the re-alignment of existing programs to meet net-zero emission and energy poverty objectives, while enabling an appropriate ramp-up period from the existing level of effort.

The federal government committed \$2.6 billion under the Canada Greener Homes grant program and the Canada Infrastructure Bank earmarked \$2 billion for commercial building retrofits. At least these amounts should be dedicated to low-to-moderate income Canadians who can benefit the most from energy

¹² Preliminary results from Efficiency Canada 2022 Provincial Energy Efficiency Scorecard.



efficiency upgrades. Thus, a \$2 billion commitment in the next budget is an appropriate minimum investment to achieve federal objectives and to demonstrate equity for low-income households.

Brendan Haley, PhD
Efficiency Canada Director of Policy Research
Adjunct Research Professor, Carleton University, School of Public Policy and Administration

For more information on low-income energy efficiency, see the following links to Efficiency Canada and related publications:

Kantamneni, Abhilash & Brendan Haley 2022. Efficiency for All: A review of provincial/territorial low-income energy efficiency programs with lessons for federal policy. <https://www.energycanada.org/low-income-report/>

Kantamneni, Abhilash & Brendan Haley 2021 "A national energy poverty strategy for Canada? What can we learn from national initiatives in other jurisdictions" <https://www.energycanada.org/national-energy-poverty-strategy/>

Polling: Canadians support low-income energy efficiency 2022 <https://www.energycanada.org/polling-canadians-support-low-income-energy-efficiency/>

Haley, Brendan 2022, Budgeting for net-zero emissions in inflationary times. Policy Options, March 9, available at <https://policyoptions.irpp.org/magazines/march-2022/budgeting-for-net-zero-emissions-in-inflationary-times/>