

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

By:

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Recommendations

- **Recommendation 1:** That the government provide funding in the amount of \$1.5 billion to expand green building workforce training such as the window wise certification program and funding to Natural Resources Canada (NRCan) to work on expanding the ENERGY STAR program (formulas and manufacturing of windows).
- **Recommendation 2:** That the government provide funding in the amount of \$27 billion to capitalize a home retrofit finance platform implemented through the Canada Mortgage and Housing Corporation, and other relevant partners. This would be a \$40,000.00 interest free Home Renovation line of credit.

Re-start the economy and increase resilience against COVID-19

Upgrading our homes to be energy efficient and lower our carbon footprint will provide both immediate and quick increases in jobs and aggregate demand, while increasing economy-wide productivity and setting a long-term direction for economic growth for decades to come. The multiple benefits of energy efficiency can help Canada manage both demand and supply shocks from COVID-19. Energy waste is also found in every region in Canada, making efficiency a resource that can create jobs throughout the country and unite Canadians.¹

Better houses can restart Canada's economy by:

- 1) Creating jobs. Efficiency program investments create 16-30 jobs per \$1 M invested², and 60% of expenditure on home retrofits goes towards labour.³
- 2) Increasing consumer spending in the local economy because energy savings reduce expenditures on imported energy and increase local buying power.
- 3) Building investor confidence and business expectations by demonstrating a profitable pipeline of energy savings opportunities for decades to come.
- 4) Preparing for the future by increasing building resilience to extreme weather from climate change and locking-in Green House Gases (GHG) reductions through advanced building codes and efficiency standards.

Ministerial mandate letters include priorities such as encouraging home retrofits, grants, and financing. The suggestions below complement these initiatives, and are tailored to enabling economic re-start and adaptation to COVID-19.

A \$27 billion public investment over 5 years will hit the Liberal Party's target to retrofit 1.5 million homes. By investing in a \$40,000.00 interest free Home Renovation line of credit with the Canadian banks as partner investors. This investment plan will create 660,862 person-years of employment (132,172 annual average), increase GDP by \$160 billion (\$32 billion annual average), and reduce annual GHGs by 20.4 Mt.



¹ See Haley and Gaede, 2019. Canadians can unite behind energy efficiency. Policy Options

<https://policyoptions.irpp.org/magazines/november-2019/canadians-can-unite-behind-energy-efficiency/>

² Dunsky Energy Consulting, 2018. The economic impact of improved energy efficiency in Canada. "Pan-Canadian Framework Plus" scenario.

³ <https://www.iea.org/articles/energy-efficiency-and-economic-stimulus>

⁴ CIBC Poll (CNW Group/CIBC), http://cibc.mediaroom.com/2019-06-04-Canadian-homeowners-continue-to-cut-back-on-home-renovation-spending-in-2019-CIBC-Poll#assets_all

- According to Royal Bank of Canada (RBC's) Economic Report, **40%** of homes in Canada are owned by people who are younger than 35.⁵
- **72% of Millennials** plan on spending on larger renovations in the coming year.⁵
- **62%** of Canadians live in a home built between 1950 and 1999.⁶ Requiring renovation and often lacking in energy-efficient products and designs.

Below we present initiatives that can occur while physical distancing measures are in place, programs that can ramp-up quickly to provide stimulus, and strategies to promote a durable, long-term economic recovery.

Immediately expand energy efficiency projects:

Windows & Doors retrofits. Increase the ENERGY STAR ratings of windows to reduce GHGs and provide grants to manufacturers who work on increasing the ENERGY STAR ratings of the windows they produce. Given that 60% of expenditure on home retrofits goes towards labour, this type of retrofit is a strong job creator.⁷

Advanced building codes. Program strategies can complement the adoption of Canada's net-zero energy ready model national building codes (ex: Increase the ENERGY STAR ratings of windows), and improved code compliance.

Provide funding to NRCan. Help demonstrate scientifically (formula) that each increase in Energy Rating (ER) from an ENERGY STAR Window or Door will reduce by "X" amounts GHGs (1 ER = X in the reduction of carbon footprint). This would avoid costly energy audits and remove red tape. It would improve comprehension amongst the public the importance of buying high ENERGY STAR rating windows and doors.

Launch a building retrofit finance platform. We can build a durable, long-term, recovery by providing a clear direction for future growth opportunities through a \$27 billion capitalization⁸ of a public investment strategy aimed at creating a

⁵ Millennial homeownership rates in Canada consistently higher than in other countries: RBC, <https://www.bnnbloomberg.ca/millennial-homeownership-rates-in-canada-consistently-higher-than-in-other-countries-rbc-1.1222379>

⁶ <https://www.canada.ca/en/news/archive/2011/01/harper-government-home-renovation-tax-credit-success-saved-average-family-over-700-pumped-billions-into-economy-585819.html>

⁷ Scheer, J. and B. Motherway (2011), *Economic Analysis of Residential and Small-Business Energy Efficiency Improvements*, Sustainable Energy Authority of Ireland, <https://www.seai.ie/publications/Economic-Analysis-of-Residential-and-Small-Business-Energy-Efficiency-Improvements.pdf>

⁸ Consistent with estimate of \$300-\$500 billion retrofit investment needs, under strategy to attract private capital and recycle capital as investments are repaid and/or securitized and sold to institutional investors.

functioning home retrofit market. Public investment will leverage private capital through de-risking and co-investment strategies with banks.

To enable rapid response to create jobs, and affordability concerns created by the pandemic, initial investments can focus on energy efficient windows & doors in homes.

The retrofit finance platform will be led by:⁹

- 1) Canada Mortgage and Housing Corporation. The loans would be paid back over 10 years through a Canadian Mortgage and Housing Corporation (CMHC)-insured mortgage, a bank loan or in partnership with a utility company through savings on monthly bills.¹⁰
- 2) INTEREST-FREE loans of up to \$40,000 (over a 10-year term) to help homeowners and landlords pay for retrofits that would make their homes more energy-efficient.¹⁰
- 3) The goal is to retrofit 1.5 million homes to help Canadians make their homes more energy efficient, and better protect them from climate-related risks, over the next 5 years.¹⁰

Retrofit at scale demonstrations

To meet net-zero emissions economy objectives, we need to dramatically expand the number of home retrofits per year and increase the depth of energy savings and carbon reductions. Retrofitting at much larger scale promises to reduce costs because retrofit approaches can be standardized across similar building types, while manufacturers streamline and upgrade their processes to meet large-scale, consistent demands. A great example is to mandate a new building code that all new windows be ENERGY STAR (minimum 34 ER rating is recommended for Canada since January 1st, 2020) which would decrease significantly GHGs.

We suggest supporting innovative manufacturing companies to produce more energy efficient windows. This could be facilitated by Natural Resources Canada Office of Energy R&D who could help manufacturing companies within Canada to produce more energy efficient windows and promote technologies that reduce GHGs.

⁹ These recommendations mirror the Expert Panel on Sustainable Finance.

¹⁰ Trudeau promises \$40K interest-free loans to make homes energy efficient and safer from severe weather, <https://www.cbc.ca/news/politics/liberal-climate-change-plan-home-retrofits-1.5296400>

Advanced building standards to lock-in savings

All strategies noted above should complement a long-term market transformation towards low-carbon homes by reinforcing the introduction of mandatory building energy codes, labels, and standards (Ex: ENERGY STAR WINDOWS with a minimum of 34 ER). The final 2020 national model energy codes should be released this year.¹¹ Unlike previous codes that only provided a minimum standard, the new building codes provide performance tiers moving towards a net-zero energy ready standard. The federal government can provide funding bonuses for Provinces that adopt higher building standards, hence higher ENERGY STAR rated windows.

Results

The funding amounts suggested above are calibrated to meet the Liberal Party of Canada's election platform commitment to retrofit 1.5 million homes in 5 years, which is 15% of the single-family dwelling building stock. See a proposed investment plan below, with estimated results.¹²

¹¹ Lockhart 2020. What you need to know about the new building codes. <https://www.efficiencycanada.org/what-you-need-to-know-about-the-new-building-codes/>

¹² Calculations by Efficiency Canada based on Dunsky 2018 (PCF+ scenario), Coalition for Green Capital, and Ralph Torrie retrofit calculator, and estimates of current retrofit rates from Natural Resources Canada.

5-year investment plan

Initiative	5-year investment (\$ billion)
Training the green building workforce + NRCan research (formula + manufacturing)	\$1.5
Home Retrofit Finance Platform (\$40,000 Interest free loan)	\$27
Total	\$28.5

5-year impacts

Retrofits		
	Residential homes	1.5 million
	Multi-unit residential buildings	752 thousand dwellings
New Jobs ¹³		
	Total person-years	660,862
	Average annual jobs	132,172
GDP Increase ¹⁴		
	Total GDP increase (\$ billion)	\$160 billion
	Average annual GDP increase (\$ billion)	\$32 billion
	Annual GHG reduction (Co2 e) ¹⁵	20.4 Mt
Societal benefits		
	Resilience against weather extremes	
	Better Energy Efficient Windows and Doors	
	Energy poverty reductions (savings on energy utilities) and more affordable housing	

¹³ Multiplier from PCF+ scenario in Dunskey Energy Consulting 2018, including participant + program spend. Excludes spending on training. These figures include job creation in energy efficiency sector and economy-wide from spending multipliers.

¹⁴ Multiplier from PCF+ scenario in Dunskey Energy Consulting 2018, using program and participant spend. Excludes spending for training.

¹⁵ Estimate using Ralph Torrie retrofit calculator. Assumption available upon request.