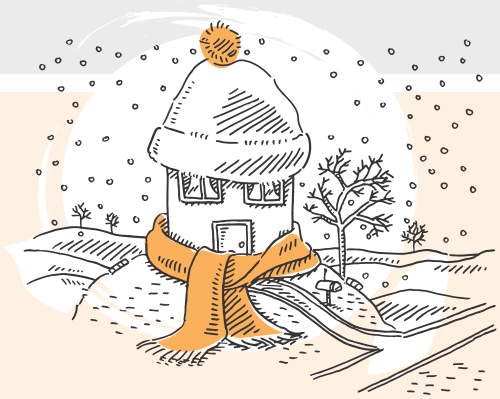
A Healthy, Green and Just Recovery

Building Retrofits 4
FACTSHEET
March 2021



Invest in building retrofits

WE SPEND NEARLY 90% OF OUR TIME INDOORS – INSIDE OUR HOMES, AND IN SCHOOLS, OFFICES AND WORKPLACES. THE CONSUMPTION OF FOSSIL FUELS TO HEAT AND COOL INDOOR SPACES CREATES GREENHOUSE GAS (GHG) EMISSIONS THAT CONTRIBUTE TO CLIMATE CHANGE AND AIR POLLUTION. IMPROVING THE ENERGY EFFICIENCY OF BUILDINGS IMPROVES HUMAN HEALTH BY REDUCING AIR POLLUTION AND CLIMATE IMPACTS THAT RESULT FROM THE USE OF FOSSIL FUELS. EFFICIENCY IMPROVEMENTS CAN ALSO PRODUCE BETTER INDOOR AIR QUALITY AND PROTECT PEOPLE FROM THE COLD AND EXTREME HEAT.

Building retrofits are good for us, our communities and our planet.

An ambitious program to retrofit existing buildings is essential if we are to stop global warming. Promised federal investments to kick-start the economy after the COVID-19 pandemic provide an opportunity to foster a transition away from fossil fuels, build communities that are more resilient, improve health, and reduce health inequities.

CLIMATE CHANGE IS ALREADY HARMING PEOPLE IN CANADA

The physical and mental health of Canadians is already being harmed by climate change. In different parts of the county, climate change has contributed to an increase in the frequency and intensity of floods, wildfires, hurricanes, and ice storms, as well as heat waves, over the last several decades. These events have exposed millions to extremely high levels of toxic air pollution, forced hundreds of thousands in Canada to evacuate their homes, and left hundreds of thousands without power for extended periods. Climate change is also melting permafrost in the far North, increasing sea levels on three coast lines, and extending the range of vector-borne diseases such as Lyme disease.

While climate change affects everyone, it has a greater impact on some. Young children, older Canadians, and people with pre-existing health conditions are more sensitive to heat waves and wildfire smoke. Indigenous Peoples in northern communities can experience greater food insecurity as melting permafrost and changes in animal populations disrupt their access to traditional food sources. In addition, people who live on lower incomes may not have the resources to protect themselves or recover from extreme weather events such as heat waves and floods.

A CALL FOR BOLD INVESTMENTS IN BUILDING RETROFITS

Energy experts recommend extensive energy retrofits of buildings to reduce greenhouse gas emissions and strengthen climate resilience. Energy experts, Torrie, Bak and Heaps, estimate that a major program of loans and grants, with federal investments of $21 billion over 10 years, could create three million person-years of work and establish local markets for green materials and technologies. This program could also save homeowners an estimated $12.5 billion each year in residential energy costs while reducing annual greenhouse gas emissions by an estimated 58 million tonnes (Mt) by 2030.

Interventions that improve the comfort and quality of indoor environments can also improve overall health

BUILDING RETROFITS CAN REDUCE HEAT-RELATED HEALTH IMPACTS

Between 1948 and 2016, the annual average temperature in Canada has increased 1.7°C with the greatest increase in the North (2.3°C). While this shift in temperature is likely to reduce the number of cold weather-related deaths in Canada, it will also increase the number of heat-related premature deaths.

Hot weather puts a strain on the body's ability to control its internal temperature, a physical stress that can aggravate chronic conditions. Extreme temperatures can produce heat exhaustion and heat stroke, increase hospital emergency visits and admissions, and even result in deaths, particularly among older people. In 2018, it is estimated that over 2,700 people over 65 years in Canada died prematurely because of heat exposure. Building retrofits such as improved insulation and the installation of heat pumps can cool homes and reduce the adverse health impacts of higher temperatures.

BUILDING RETROFITS CAN IMPROVE INDOOR ENVIRONMENTS AND HEALTH

Extreme heat, cold, mould and dampness in indoor environments are associated with increases in cardiovascular disease, strokes, asthma and other respiratory diseases, and premature deaths. Studies have found that interventions that improve the comfort and quality of indoor environments can also improve overall health, respiratory health and mental health, with particular benefits for those with pre-existing respiratory conditions.

Building retrofits such as improved insulation, energy efficient windows, modern heating and cooling systems, and better ventilation can improve health by keeping occupants warmer in winter, cooler in summer, and by improving indoor air quality. Fossil fuel consumption can be reduced and indoor environments for people can be improved by using heat pumps and renewable energies, as well as insulation and energy efficient products.

BUILDING RETROFITS CAN REDUCE AIR POLLUTION

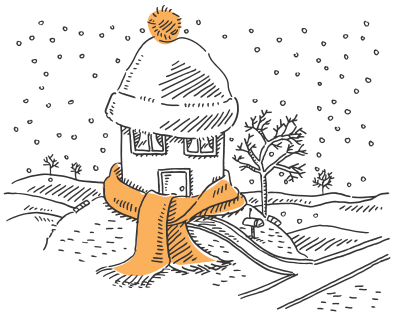
Outdoor air pollution continues to be a significant source of illness and disease in Canada. It is responsible for about 14,600 early deaths each year from conditions such as heart disease, strokes, lung cancer and chronic obstructive pulmonary disease.

Energy experts, Torrie, Bak and Heaps, estimate that a program of extensive retrofits could reduce emissions of both air pollutants and greenhouse gases from buildings by as much as 45% by 2030. The resulting improvements in air quality would produce substantial health benefits, decrease health care costs, and reduce the number of premature deaths.

BUILDING RETROFITS CAN STRENGTHEN CLIMATE RESILIENCE

Building retrofits can also include upgrades to better protect people against extreme weather events. In areas prone to floods, backflow valves can be installed in basement drains to prevent water backup through sewers. This can prevent flooded basements and the potential exposure to mould, which can aggravate asthma and other respiratory conditions. Where appropriate, fire resistant roofing materials can be used to help protect people and property from wildfires.

These measures strengthen climate resilience; they limit the damage associated with climate change and support recovery from those events. Climate resilient retrofits can help avert the health impacts, costs, disruption and mental health stresses that can result from property damage.



Health inequities can be reduced by prioritizing lower-income households and housing for retrofit funding

BUILDING RETROFITS CAN REDUCE HEALTH INEQUITIES

Lower-income populations, newcomers, racial minorities, Indigenous Peoples, and people with long-term health conditions can experience higher rates of illness and premature deaths because of social disadvantages. As a result, they are at increased risk from climate-related impacts such as extreme heat and wildfire smoke. These groups may also lack the resources needed to protect themselves or recover from extreme events such as wildfires and floods.

Building retrofits can reduce the negative health impacts and time away from work due to sickness or medical appointments by making indoor environments healthier. By reducing energy use, retrofits can cut energy bills, leaving people with more money to spend on healthy food, clothing and other necessities.

Health inequities can be reduced by prioritizing lower-income households and housing for retrofit funding and ensuring that grants are of sufficient size to support the needed retrofits.

In addition, programs that strategically target people from disadvantaged populations for training in building retrofits can help reduce health inequities in communities across the country.

RETROFITTING BUILDINGS FOR A HEALTHY, GREEN AND JUST RECOVERY

In December 2020, the federal government announced a revised climate action plan for Canada. The plan includes a series of initiatives to improve the energy efficiency of homes and buildings including:

- a program of small grants (up to $5,000) for home retrofits;
- free EnerGuide assessments for houses;
- hiring and training of home energy auditors;
- resources for community, commercial and municipal building upgrades;
- plans for a future low-cost loan program; and
- commitments to work with Indigenous communities, provinces, territories, and industry on further plans to expand skill training programs, boost innovation in new efficiency technologies, and upgrade national building codes to set new efficiency standards for retrofits and new construction.

The new federal program proposes $6.1 billion to be spent over 10 years in addition to previously announced commitments in the range of $5.6 billion. The plan identifies significant steps toward increased climate resilience and promises progress toward the achievement of Canada's climate change goals. Though impressive, these investments fall short of recommendations from Torrie, Bak and Heaps who propose financial commitments amounting to $20.7 billion over the same period. To achieve optimal uptake and benefits, the federal program should offer grants worth more than the currently proposed maximum of $5,000 and should prioritize lower-income households and housing for grants.

Use your voice to call for greater investments in building retrofits to create healthy, green and just communities.

For more information, see our Backgrounder on Building Retrofits

CANADIAN PUBLIC HEALTH ASSOCIATION

OPHA Ontario Public Health Association / l'Association pour la santé publique de l'Ontario

CHASE CANADIAN HEALTH ASSOCIATION FOR SUSTAINABILITY & EQUITY