



WRITTEN SUBMISSION FOR THE

# **Pre-Budget Consultations in Advance of the Upcoming Federal Budget**

STANDING COMMITTEE ON FINANCE  
HOUSE OF COMMONS

AUGUST 6, 2021

# Recommendation Summary

## 1 To supercharge the Retrofit Economy, the government should:

- Invest \$10 to \$15 billion in partnership with the provinces to start a national retrofit strategy and implementation plan to reduce greenhouse gas emissions. The Strategy must contain:
  - Specific milestones, a percentage of building stock or square footage refurbished as an annual objective, and tonnes of CO<sub>2</sub>e eliminated annually to achieve low or zero carbon performance; and,
  - Funding to support the cost of deep emissions retrofit upfront (transition plans) and the implementation for all ownership models; arrangements to reduce investment risks, especially for multi-unit residential and institutional buildings.
- Drive low-carbon retrofits at scale by leveraging supportive initiatives and standards, such as the Investor Confidence Project (ICP) to unlock private sector investment
- Facilitate the establishment of a standardized sharing framework with provinces to enable benchmarking and the strategic disclosure of building profile and performance data
- Ensure all forms of federal infrastructure funding are aligned to advance the uptake and implementation of the anticipated national retrofit building code

## 2 To stimulate Zero Carbon construction, the government should:

- Include crown corporations with significant real-estate in the Greening Government Strategy
- Commit all funded buildings above 20,000 ft sq. to achieve the Zero Carbon Building Standard or similar target
- Establish Canada's low-carbon supply chain with:
  - \$20 million for Life-Cycle Assessments (LCA) and Environmental Product Declarations (EPD) to make them affordable for small- and mid-sized Canadian companies (SMEs); and,
  - \$20 million to the LCA2 initiative to invest in embodied carbon research and support the adoption of LCA.
- Require low carbon and "made in Canada" construction materials thresholds; ensure eligible firms demonstrate low-carbon development, design, and experience
- Create a new commercial building incentive with \$50 million to support upfront cost for early stage energy modelling and integrated design
- Streamline funding through a hub that combines investment programs from all levels of government

## 3 To advance Workforce Development, the government should:

- Extend funding for the Sectoral Workforce Solution program until 2025/2026 (\$360 million per year) to:
  - Prioritize investment in workforce capacity development for building retrofits;
  - Fund the development of industry-led low-carbon occupational roadmaps; and,
  - Invest in the rapid upskilling of workers and develop flexible approaches to low-carbon skills training to bring underrepresented groups into the green building sector.
- Invest in development of collaborative platforms and partnership initiatives that remove the siloed approach to skills development, such as [Workforce 2030](#)

# Introduction

The Canada Green Building Council (CaGBC) is a national, non-profit industry organization dedicated to advancing green building. Our market research and analysis, certification programs and capacity-building efforts have accelerated the adoption of high-performing, healthy and low-carbon buildings and communities. With more than a thousand corporate members, we regularly convene industry stakeholders to share information and advance industry priorities.

Buildings are Canada's best opportunity to reduce greenhouse gas (GHG) emissions, while simultaneously providing socio-economic and environmental benefits. They are integral to resilient and adaptive communities and contribute to safe and accessible workspaces, and affordable homes.

Meeting national and international climate commitments requires low-carbon buildings. However, Canada's new emission reduction target of 40-45 per cent by 2030 compared to the 2005 levels is challenged by complex realities:

- Despite efforts, the building sector increased its overall emissions by almost 6% between 2005 and 2019;<sup>1</sup>
- Buildings account for 17% of Canadian GHG emissions. Combined with materials and construction processes, this rises to 28%; and,
- Less than a third of green building industry leaders interviewed have a decarbonization transition plan with specific targets.<sup>2</sup>

Policies must shift and investments must work to unlock the green building sector's full potential. In 2018, over 460,000 Canadians worked in green building (including operations, construction, education, and manufacturing), contributing approximately \$48 billion to the GDP – an increase of over 50 per cent from four years prior. To achieving 2030 emission reduction targets, green building will need to see a threefold increase to 1.5 million jobs.

Budget 2022 will set the pace for the decarbonization of the construction sector. CaGBC recommends that the federal government prioritize policies and public and private sector market support for green buildings in the following ways:

## 1. Supercharge the Retrofit Economy

Retrofitting existing buildings to realize net zero emissions is foundational to achieving Canada's overall GHG reduction targets. The federal government, in partnership with provinces and territories, must establish a retrofit strategy and implementation plan that defines the required investments to achieve zero carbon performance, the number of buildings to be refurbished per year (percentage or amount of square footage), the annual target for emissions reductions from existing buildings and reporting/disclosure of annual reductions achieved. For instance, the European Union has identified a target of three per cent annually for retrofitting public buildings.<sup>3</sup>

The Canada Infrastructure Bank's \$2 billion investment is a good start, but more is needed. The Pembina Institute calculated that governments need to invest between \$10 to \$15 billion per year<sup>4</sup> to quickly increase retrofit activity; otherwise, it will take 71 years to retrofit commercial buildings at the current rate, and 142 years for residential homes.<sup>5</sup> A specific focus should be multi-unit residential (MURB) and institutional buildings (schools, hospitals etc.), which present a more difficult business case to achieve reasonable energy cost savings while significantly reducing emissions, especially for low and mid-rise MURBs. On the other hand, institutional buildings have a more positive business case due to the long-term ownership model. Part of this investment should go to a program to help owners to create transition plans for their portfolio of buildings.

To inform future policy, raise awareness of carbon reduction, and measure outcomes, effective benchmarking and disclosure must become a standard practice for building operations. The 2018 Reports from the House of Commons and the Senate recommended these activities be regulated across Canada, and can be easily done using tools such as Arc Skoru, a globally recognized building performance platform.

While the National Research Council (NRC) develops new energy and building codes at the national level, funding from federal departments for retrofits and new construction must align with the adoption of stricter codes at the local level.

<sup>1</sup> ECC, *Greenhouse gas sources and sinks: executive summary 2021*, <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2021.html#toc3>

<sup>2</sup> CaGBC, *National Infrastructure Assessment: Survey To Industry Leaders*, May 2021.

<sup>3</sup> Euractiv, *Complete overhaul of buildings needed to meet EU's 2030 climate goal*, December 3, 2020

<sup>4</sup> Pembina Institute, *Canada's Renovation Wave*, July 2021.

<sup>5</sup> Efficiency Canada, *Canada Retrofit Mission At A Glance*, June 2021.

Lastly, the federal government can help de-risk low-carbon retrofit investment opportunities for private sector lenders by introducing standardized project origination and quality assurance frameworks like the Investor Confidence Project (ICP) and its Investor Ready Energy Efficiency certification. By providing third-party verification of retrofit projects, these protocols increase transparency, consistency, and the reliability of energy-efficiency retrofit projects.

## 2. Stimulate Zero Carbon Construction

Zero carbon buildings (ZCBs)<sup>6</sup> offer economic and environmental benefits and are technically and financially feasible to design, construct and operate. ZCBs drive innovation, enhance Canada's global competitiveness and support the domestic supply chain of services, materials, and technologies with associated gains in skilled jobs.

CaGBC encourages the federal government to require and fund all federal crown corporations with significant real-estate to adopt the Greening Government Strategy. Expanding the Strategy to crown corporations will further enhance an already positive business case while catalyzing the national supply chain.

Furthermore, Budget 2022 must include a commitment that all federally funded buildings above 20,000 ft sq. should achieve the [Zero Carbon Building Standard](#) or similar target. Every building built today and every existing building that are not zero carbon in operation contributes to increased emissions – and will inevitably require major investments in mechanical equipment, ventilation systems, and building envelopes to achieve net-zero emissions by 2050.

Achieving these objectives will also require a focus on embodied carbon.<sup>7</sup> Almost 75 per cent of emissions between now and 2030 are expected to come from materials used in new buildings. Federal procurement policies must shift from the lowest-cost option to one that favours sustainability – with low-carbon construction materials and a set “made in Canada” threshold. This preferred procurement approach already exists, with examples such as the California Buy Clean Act, and could become part of a Canada Buy Clean program.

This new supply chain will need sustained research and development and manufacturing support. The federal government should provide a \$20 million investment through the life cycle assessment (LCA2) initiative for embodied carbon research and to identify benchmarks and reduction targets to incorporate embodied carbon requirements into the National Building Code.<sup>8</sup> Another \$20 million would help Canadian SMEs register

Environmental Product Declarations (EPD) and obtain LCAs for low-carbon products.

Despite a positive financial return over a 25-year life-cycle, a modest premium for large buildings remains a financial barrier to ZCBs, limiting their adoption. At an early stage, integrated design and energy modelling are required, costing tens of thousands of dollars. These costs can discourage buildings owners from pursuing ZCBs.

Finally, like other sectors, the green building sector expects a level playing field, a predictable and stable funding and financing policy environment, and a coherent yet flexible approach from public authorities, especially the federal government. These needs can be addressed by providing an industry-accessible hub that integrates all retrofit and new construction investment tools from municipal, provincial, and federal levels.

## 3. Advance Workforce Development

At present, the building sector is not adequately equipped to deliver the scale and scope of green building construction and retrofitting required by Canada's GHG targets. Success will be dependent on the workforce's capacity to design, build, renovate, and operate low- and zero-carbon buildings. Budget 2022 must connect climate and workforce development agendas across government departments, policies and programs, and leverage the green building sector to create jobs and reduce emissions.

The workforce programs announced with the Budget 2021 will fast-track the workforce needed to build a low-carbon economy – but will last only three years. The federal government must extend the Sectoral Workforce Solutions Program at least until 2025/2026 to invest in existing workers' low-carbon knowledge, practices, and technologies over the long term. In addition, a new and diverse generation of green building workers must be brought in, including under-represented groups such as women and racialized youth. One approach is the fit-for-trainee program for the rapid and flexible delivery of low-carbon skills training.

The federal government should partner with industry. Collaborative approaches such as [Workforce 2030](#), bring together employers, labour and education interests to break siloed approaches and create shared roadmaps<sup>9</sup> for workforce development.

<sup>6</sup> A zero carbon building is a highly energy efficient building that produces onsite, or procures, carbon-free renewable energy or high-quality carbon offsets to offset the annual carbon emissions associated with building materials and operations.

<sup>7</sup> Embodied carbon emissions arise from manufacturing, transport, installation, use, and end-of-processing of materials used in building construction. Design teams can find the greatest embodied carbon savings by carefully considering the issue from project outset;

<sup>8</sup> The National Building Code can help ensure embodied carbon reduction is a goal from the start.

<sup>9</sup> Workforce occupational roadmaps represent internal exploration of how each occupation is impacted and how it can prepare to work on a low carbon project including upskilling, innovating work processes, and growing the capacity of new and incumbent workers.

# Conclusion

Climate change and the need for increased resiliency presents an unprecedented challenge and an opportunity for Canada. Reaching net-zero emissions by 2050 requires the decarbonization of Canada's infrastructure, which includes buildings. Achieving this goal requires the federal government to reduce GHG emissions and finance bold actions on resilient buildings and infrastructure simultaneously. Doing so will showcase Canada as a global leader, provide an unprecedented investment boost and economic opportunity, and ensure that buildings can respond to rapidly changing climates.

The Intergovernmental Panel on Climate Change's June 24, 2021 report demanded governments and companies double their efforts to decarbonize. The green building sector is ready to move forward on decarbonization, including retrofits. Targeted, intentional and thoughtful federal leadership is needed around procurement and public investment. Further, a national retrofit strategy that aligns GHG emissions reduction with affordable homes and buildings will achieve much-needed health and well-being benefits.

Across the country, thousands of energy efficiency audits have been conducted, offering a pipeline of building retrofit projects which would result in significant emission reductions and job creation. Many zero carbon designs exist but need financing for the additional capital expenditures involved. Other shovel-ready green building projects approaching development can be incentivized to enhance their carbon targets.

Moving to ZCBs and, more generally, to a net-zero emissions economy will change Canada profoundly. We need to be bold and creative to achieve the country's 2050 decarbonization goal and match our ambitions with action.