

**Canada Green Building  
Council (CaGBC)  
Submission**

**Pre-Budget  
Consultations 2021**



## Recommendations

**Recommendation 1:** To advance workforce development and employment, the government should:

- Invest \$100 million in rapid upskilling of COVID-impacted workers into green building jobs relevant to retrofits and new zero carbon building construction and manufacturing;
- Support the development of collaborative platforms such as [Workforce 2030](#) that break siloed approaches to recruitment, training, and employment; and,
- Develop new approaches to low-carbon skills training, such as micro-credentialing or creating a pathway to achieve a “green seal” designation, delivered through provincial and territorial governments.

**Recommendation 2:** To catalyze a low-carbon retrofit economy, the government should:

- Work with stakeholders to establish an industry-driven retrofit program that builds out workforce capacity in support of the forthcoming retrofit code and newly introduced retrofit financing programs;
- Allocate \$50 million through zero per cent financing of energy audits to establish a pipeline of retrofit projects;
- Deploy up to \$10 billion through the Canada Infrastructure Bank (CIB) to finance low-carbon retrofits to support the amalgamation of retrofit project investments; and,
- Require a standardized approach such as the [Investor Confidence Project](#) for developing and evaluating energy efficiency projects.

**Recommendation 3:** To stimulate zero carbon construction, the government should:

- Require all federally-funded building projects to achieve zero-carbon performance;
- Use the procurement process to require that eligible firms demonstrate low-carbon development, design, and construction experience;
- Support the investment of up to \$20 million in embodied carbon research to identify benchmarks and reduction targets, with the goal of incorporating embodied carbon requirements into the National Building Code.
- Grant \$1 billion or 10 per cent of the development costs for public and private sector buildings to ensure they are built to achieve low-carbon performance.

## Introduction: From Relief to Recovery

The Canada Green Building Council (CaGBC) is a national, non-profit organization dedicated to green building. Our market research and analysis, certification programs, and capacity-building efforts have accelerated the transformation to high-performing green buildings, homes, and communities throughout Canada.

Following an unprecedented global health crisis, Canada is making significant investments in support of an economic recovery. Like the 2008 recession, the country is expected to turn to its economic pillars, including construction and infrastructure projects, to reignite the economy and create urgently needed jobs. It will need to continue prioritizing health and safety for the construction industry, owners, and tenants. For occupants (e.g., office workers, school children, homeowners, etc.) green buildings offer significant health and comfort benefits. The most frequently cited are better ventilation, access to daylight, and improved indoor air quality, which are [proven factors for enhanced health, well-being and productivity](#). Green buildings are also better positioned to prevent and reduce the threat from COVID-19.

While today's health and economic circumstances are unprecedented, this remains the critical decade for climate action. Decisions governments make today must help Canada achieve its climate change commitments. Economic recovery and climate action can go hand-in-hand. A green economic recovery provides a path for Canada's transition toward a sustainable and low-carbon economy. Without targeted action on climate change today, Canada will not meet its climate change commitments. With the throne speech, the investment in retrofits through the Canada Infrastructure Bank (CIB), and the improved Climate Change Framework released last December, the government has demonstrated a commitment to this path forward.

Another strong indication that the federal government has made strides towards a net-zero carbon economy is Bill C-12 which requires that national targets for reducing greenhouse gas (GHG) emissions in Canada be legislated to attain net-zero emissions by 2050. To achieve this goal, Canada must push forward and rapidly transition to a low-carbon future. The building sector will be at the forefront of this shift and can significantly reduce carbon emissions. Buildings represent over seven per cent of Canada's GDP and almost 30 per cent of Canada's GHG emissions when building operations, construction, and materials are included.

CaGBC recognizes that the federal government must balance Canadian businesses' needs with an economic recovery that advances the low-carbon economy. Investing in and establishing the market for low-carbon construction and manufacturing can accomplish both, while enabling the Government of Canada to meet its commitment to reduce carbon emissions to 30 per cent below 2005 levels by 2030 as well as its economic goal to create one million jobs.

### **Building a Low Carbon Economy**

The building sector can play an important role in Canada's economic recovery by stimulating the economy and getting people back to work. At the same time, it can reduce emissions, improve Canadians' health, and drive innovation.

CaGBC [documented that over 460,000 Canadians worked](#) in green building when considering operations, construction, education, and manufacturing. Also, in 2018 green building activity contributed approximately \$48 billion towards Canada's GDP – an increase of over 50 per cent in just four years.

With the Government of Canada [investing in a recovery strategy targeting green building and adopting progressive policies](#), we can expect that by 2030:

- The building industry will have met its contribution to climate targets with an annual reduction in 2030 of 53 Mt CO<sub>2</sub>e;
- The green building sector will contribute \$150 billion in direct annual GDP; and
- There will be 1,470,032 direct jobs in green building in Canada.

These gains are impressive both for the economy and for Canada’s climate commitments. To advance these outcomes, CaGBC recommends that the federal government prioritize investments and market support in green buildings – both public and private – in the following ways:

## Recommendations

### 1. Workforce Development

Canada needs to grow the number of skilled workers and expand existing professional expertise to meet the low-carbon building industry’s demands. In the Toronto region alone, the green building sector needs a new generation of skilled tradespeople. An estimated 147,000 job openings will emerge over the next 15 years due to increased demand and retirements. A highly trained workforce is critical to delivering low-carbon new construction and deep energy retrofits at scale. The federal government can be a leader by supporting the reskilling and upskilling of Canada’s construction workforce by:

- Investing \$100 million in rapid upskilling of COVID-19-impacted workers, especially from marginalized groups, communities, and hard-hit economic sectors, into green building jobs relevant to retrofits and new zero carbon building construction and manufacturing. Investments should focus on high-demand occupations where there is the deepest labour shortage: retrofits managers, energy modellers and evaluators, skilled construction trades (i.e., geothermal drillers, refrigeration mechanics, heat pumps installers, insulators, etc.);
- Working with the industry to establish collaborative platforms and partnership initiatives such as [Workforce 2030](#) that connect across sectors and break siloed approaches to tackle workforce development for improved efficiency and outcomes. Workforce 2030 launched in 2020 as Canada’s first and only coalition supporting low-carbon workforce development across Ontario’s building industry, including related unions and education providers. It is a proven example of a collective impact approach to help address the need for a strong, inclusive, and skilled workforce that can support achieving GHG reduction targets; and,
- Partnering with industry to develop new approaches to low-carbon skills training, such as micro-credentialing or creating a pathway to achieve a “green seal”<sup>1</sup> designation, delivered through provincial and territorial governments.

### 2. Retrofit Economy

Retrofitting existing buildings to be energy-efficient and low-carbon is foundational to achieving Canada’s GHG targets. However, despite aging infrastructure and the abundance of economically viable projects, renovations are not happening at the depth or scale necessary even with a significant investment of \$2

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<sup>1</sup> An industry-led “green seal” would incorporate relevant green building skills and create a common reference point for employers, facilitating transferability of skills between projects. It would be an additional certification outside of the apprenticeship system; but it be accessible to journey people and other construction workers.

billion from the CIB. Barriers related to low-carbon retrofits remain, including the perceived high level of risk in energy efficiency investments and the limited capacity to support deeper emissions reductions. The federal government can address these barriers by:

- Working collaboratively to put in place an industry-driven retrofit program, [similar to the UK's successful program](#), will establish a national capacity to implement the forthcoming retrofit code and newly introduced retrofit financing programs. The program would strengthen industry skills development through training and education, activate a concierge-model that supports industry to better identify and pursue low carbon retrofits, and deepen market intelligence by way of research and case studies;
- Allocating \$50 million through zero per cent financing of energy audits to establish a pipeline of retrofit projects;
- Deploying \$10 billion through the CIB to finance low carbon retrofits to support the amalgamation of retrofit projects, catalyze new employment opportunities (i.e., retrofit aggregators), and introduce financing models that scale such as special purpose vehicles; and,
- Requiring an independent and transparent third-party assessment for retrofits such as the [Investor Confidence Project](#) (ICP) to ensure that projects achieve stated energy efficiency and carbon reduction targets. This approach provides a foundation for bundling projects, a prerequisite for scaling investment, by defining a roadmap from retrofit project design to reliable investment opportunity.

### 3. Zero Carbon New Construction

Zero carbon buildings<sup>2</sup> offer economic and environmental benefits and are technically and financially feasible to design, construct and operate. Zero carbon buildings drive innovation, enhance Canada's global competitiveness and support the domestic supply chain of services, materials, and technologies with associated gains in skilled jobs. Despite a positive financial return over a [25-year life-cycle, there remains a modest capital cost premium for large buildings](#), limiting adoption. The federal government should:

- Require all federally-funded new building projects and existing buildings to achieve zero carbon, along with any infrastructure funding for municipalities. Government leadership would de-risk zero carbon building for broader adoption and bring down the capital cost premium;
- Provide an investment of \$20 million for embodied carbon research, to identify benchmarks and reduction targets, with the goal of incorporating embodied carbon requirements into the National Building Code;<sup>3</sup> and,
- Use the federal procurement process to require eligible firms to demonstrate low-carbon experience and to bring down the cost of innovative technologies, products, and services as the building and manufacturing industry matures. Contract agreements should require project teams to demonstrate experience with high-performance and/or zero carbon building design and construction; and,

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<sup>2</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>3</sup> Embodied carbon emissions are those that arise from the manufacture, 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; as a foundation for all building design, the National Building Code can help ensure embodied carbon reduction is a goal from the start.

- The federal government should grant up to \$1 billion or 10 per cent of the development costs for 1,000 public and private sector buildings to build to low carbon. Funding should be scaled based on the emission reduction potential of the new construction design (at a graduated scale of 75 per cent, 90 per cent, or 100 per cent) and with a portion granted for actual performance one-year after occupancy. Projects that achieve zero carbon would be prioritized for investment and preferential funding.

## Conclusion: Ready, Set, Recover

Canada faces an unprecedented challenge – and an unprecedented opportunity. As a foundational pillar of economic recovery, the construction and infrastructure sector can be quickly mobilized with shovel-worthy projects that will generate jobs, create healthy buildings and communities, and reduce carbon emissions to avoid the worst-case scenario for climate change.

Given the long lifespan of buildings and infrastructure, investments made today must be directed toward projects that will achieve measurable carbon emission reductions. The buildings and infrastructure sector can lead the way while creating skilled jobs, driving innovation, and growing the domestic supply chain.

The building sector is ready to move forward. Many zero carbon designs exist but are held back only by the need to secure financing for the additional capital expenditures. Other shovel-ready energy-efficient projects currently approaching development could be incented to enhance their carbon targets. Across the country, thousands of energy efficiency audits have been conducted. They can offer a pipeline of retrofit projects, resulting in significant emission reductions and job creation as part of the economic recovery.

Investments in green building can be a key driver in the recovery from the current crisis, benefiting Canadians for years to come and pivoting Canada's economy toward a low-carbon future.

Sincerely,



Thomas Mueller  
President & CEO  
Canada Green Building Council