



Ready, set, grow:

How the green building industry
can ignite Canada's economy

Canada Green Building Council (CaGBC)

From Relief to Recovery

“If we get it right, the response to COVID-19 may not only minimize pain and suffering now, but can also build the foundation for a greener, safer, and more prosperous future.” -The World Bank

Following an unprecedented global health crisis resulting in nearly half of all Canadian households losing work, Canada is preparing for an economic recovery. The country will turn to its economic pillars, including construction and infrastructure projects, to help re-ignite the economy and create urgently needed jobs.

While we find ourselves in extraordinary circumstances, this remains the critical decade for climate action. As Canada transitions to a low-carbon future, construction and infrastructure will be at the forefront of change, as it represents over 7 per cent of Canada’s GDP, and almost 30 per cent of Canada’s greenhouse gas (GHG) emissions when building operations, construction and materials are included.

CaGBC recognizes that the federal government must balance the needs of Canadian businesses with supporting a recovery that successfully advances the low-carbon economy. Investing in low-carbon construction and infrastructure can accomplish both while enabling the Government of Canada to meet its climate goals of reducing emissions to 30 per cent below 2005 levels by 2030.

CaGBC Capacity

The Canada Green Building Council (CaGBC) is a non-profit industry organization advancing low-carbon, sustainable buildings and communities. With nearly 1,200 member companies and 4,000 individual practitioner members, CaGBC represents a broad cross-section of the green building industry, including manufacturers, real estate developers and managers, construction firms, and professional firms in engineering, architecture, and finance. As the leading proponent and supporter of the green building sector in Canada, CaGBC:

- Leads technical and market research to inform the best pathways to design, build and operate green buildings, leveraging findings to craft recommendations for government and industry;

- Develops green building standards¹ in consultation with the industry to drive emissions reductions and innovation in Canada’s green building sector;
- Provides the technical expertise, reviews and certifies the environmental performance of commercial, institutional and residential buildings across Canada; and
- Delivers online and in-person education programming, helping professionals advance their knowledge and skills in green building, opening the door to employment opportunities.²

CaGBC can support the government’s economic recovery efforts and help reach emission reduction targets in the building sector in the following ways:

1. Inform and administer a national program for the construction and retrofit of low-carbon buildings;
2. Generate a pipeline of shovel-worthy new construction and retrofit projects;
3. Verify environmental performance outcomes through the application and review of voluntary leading green building standards;
4. Catalyze the “upskilling” of Canada’s construction workforce by coordinating the delivery and development of low-carbon training in Canada; and
5. Help Canada reach its emission reduction targets for buildings.

Building a Low Carbon Economy

The construction and infrastructure sector will play a foundational role in Canada’s economic recovery. We have an opportunity to use this moment as a pivot point to stimulate the economy and get people back to work. At the same time we can also reduce emissions, improve the health of Canadians, and drive innovation in the building sector.

CaGBC has documented that over 460,000 Canadians work in green building. In 2018, green building activity contributed approximately \$48 billion towards Canada’s GDP – an increase of 50 per cent in just four years.

¹ Since 2002, CaGBC, acted as the exclusive license holder for the Leadership in Energy and Environment Design (LEED) rating systems in Canada and has supported the certification of over 4000 buildings and homes across the country. In 2017 CaGBC developed the Zero Carbon Building Standard (ZCBS) Program, which makes carbon reductions a key indicator for building performance assessment and provides a made-in-Canada solution to emissions reductions.

² Since 2004, CaGBC has partnered with industry experts and higher education institutions to deliver over 500,000 hours of education to over 49,000 green building professionals.

If Canada invests in a green building recovery strategy, the country can expect that by 2030:

- The building industry's contribution to climate targets will have been met with an annual reduction in 2030 of 53.0 MtCO₂e;
- The green building sector will contribute \$147.6 Billion in direct annual GDP; and
- There will be 1,446,925 direct jobs in green building in Canada.

These impressive gains are only possible with government investment in green building as part of the post-COVID-19 recovery. Should the government not direct spending toward low-carbon construction and retrofits, we expect that only a modest percentage of these benefits will materialize for the economy and Canadians.

To help advance both the goals of climate action and strong economic recovery, CaGBC recommends that the federal government prioritize investments in buildings – both public and private – in the following ways:

Recommendation 1: Workforce Development

Canada currently does not have enough skilled workers and professional expertise to meet the demands of the building industry. A highly trained workforce is critical to delivering low carbon new construction and deep energy retrofits at scale. The federal government can play an important role in catalyzing the reskilling and upskilling of Canada's construction workforce but provincial and territorial governments will be instrumental in the development and delivery of aligned educational programming. The federal government should:

- Invest \$500 million for workforce development and training to grow Canada's low-carbon workforce;
- Allocate up to \$1000/employee to access existing low-carbon training programs through providers such as the Canada Green Building Council, the Canadian Institute for Energy Training, Eco Canada, Passive House Canada, post-secondary institutions, professional associations, and trade unions; and
- Invest in the development, testing, and measurement of new approaches to low-carbon skills training, such as micro-credentialing or creating a pathway to achieve a "green seal"³ (a spinoff of the Red Seal designation) for traditional construction-related professions transitioning to the low-carbon economy.

³ An industry-led "green seal" certification would incorporate relevant green building skills and would create a common reference point for employers facilitating transferability of skills between projects. The green seal would, similarly to the Red Seal or the Gold Seal, be an additional certification outside of the apprenticeship system; but it would be accessible to both journeypeople as well as other construction workers.

Recommendation 2: Retrofit Economy

Retrofitting Canada's existing building stock to become energy efficient and low carbon will be essential if Canada is to meet its emission targets by 2030. Yet despite aging infrastructure and economically viable projects, renovations are not happening at the depth or pace necessary. Barriers to these projects include the perceived high level of risk in energy efficiency investments, deficiencies in market capacity to identify retrofit measures, and limited lending products to support deeper emission reductions. The federal government should:

- Allocate \$50 million to stimulate the development of shovel-ready projects through 0 per cent financing of energy audits (e.g., ASHRAE Level 2 and 3);
- Allocate \$10 billion through the Canada Infrastructure Bank towards a first loss loan reserve allowing qualified lenders to recover 80 per cent of the principal and accrued interest on loans supporting deep retrofit projects in the event of default;⁴
- Require the use of a standardized project origination approach such as the Investor Confidence Project⁵ to help ensure that projects will achieve stated energy efficiency or carbon reduction targets as well as secure the foundation for the bundling of projects for investment;
- Support the amalgamation⁶ of retrofit project investments into non-investment grade "green" bonds through a "warehousing" model, which are not secured by credit, and have them insured by an institution like the Canadian Housing and Mortgage Corporation (CHMC); and
- The government should leverage its procurement power by requiring all federally-owned or federally funded provincial and municipal building projects to accelerate capital improvement plans that prioritize emission reductions.

⁴ This lowers the risk for the lender and allows for a broader allocation of financing. By reducing a lender's risk exposure, this program would help improve access to capital for building owners looking to make green investments and catalyze lenders to develop new products and services for retrofits.

⁵ The Investor Confidence Project assembles existing standards and practices into a consistent process for underwriting, developing, and measuring energy efficiency retrofit projects.

⁶ Bundling of projects is a critical tool for scaling up investments in retrofits.

Recommendation 3: Zero Carbon New Construction

Zero carbon buildings⁷ offer both economic and environmental benefits and are today both technically feasible to design, construct and operate. Despite a positive financial return over a 25-year life-cycle, there is still a capital cost premium of approximately 8 per cent for large buildings, which limits widespread adoption at this time.

The federal government should:

- Require all federally funded, owned or leased building projects to move towards zero carbon. This requirement would include all newly built, owned, or leased federal buildings as well as the existing building stock, along with municipal corporate investments (i.e. Libraries, firehalls, community centres, etc.);
- Leverage the procurement process to require that eligible firms demonstrate low carbon development experience and/or a commitment to training to incent industry innovation and restructuring. Contract agreements should be amended to require project teams to demonstrate experience with zero carbon buildings or to create incentives for on-the job zero carbon training; and
- The federal government should grant up to 10 per cent of the development costs for 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%, 90%, or 100%) and with a portion being granted for actual performance one-year post-occupancy. Those projects that achieve zero carbon (100%) would be prioritized for investment and preferential funding.

Ready, Set, Grow

Canada faces an unprecedented challenge – but also an unprecedented opportunity. As a foundational sector of any economic recovery, the construction industry can be quickly mobilized with shovel-worthy projects that will generate jobs, create healthy places for Canadians to live and work, and help mitigate the worst impacts of climate change.

This opportunity makes it imperative that investments made today are directed toward projects that will achieve measurable carbon emission reductions. The building sector can lead the way by creating skilled jobs and driving innovation that will grow the low carbon economy. The sector is primed to begin: Many zero carbon designs exist but are held back only by securing financing for the additional capital expenditures. Other energy efficient-projects currently approaching

⁷ 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.

development could be incented to modify designs to meet low-carbon standards. Across the country, thousands of energy efficiency audits have been conducted and can offer a roadmap for retrofits that includes energy conservation measures, costs and savings estimates. It is possible to support the development of purpose-built rentals and/or the renovation of hundreds of apartment buildings, municipal buildings, offices, and other building types within the next 12 months resulting in significant emission reductions and job creation as part of the economic recovery.

Canadian green building suppliers and manufacturers can also be organized to support recovery. In a survey conducted by CaGBC, companies that design and manufacture products (e.g., windows, low-carbon concrete, and building envelope systems) consistently ranked financing for shovel-worthy projects as the top way that a green recovery could restore and enhance their businesses.

As Canada prepares for recovery, it will need to continue to prioritize health and safety for the construction industry and owners and tenants. For occupants (e.g., office workers, school children, homeowners, etc.) green buildings offer significant benefits for health and comfort. 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 also offer a more holistic way to look at health, as demonstrated through credible green building certifications and standards, including promoting green cleaning protocols, entry design for contaminant removal, air filtration and indoor clean air strategies. These measures are preventative for any future health crises.

The current health crisis is unprecedented in Canada's history. The decisions the government makes now could set a new course that can benefit Canadians for the next 10, 20, 50 or even 100 years. Science tells us that without targeted action on climate change today, we will subjugate future generations to significant environmental, economic and social disruptions. The economic recovery this health crisis has precipitated could be the tipping point we need to transition to a sustainable and low-carbon economy. There is no reason why economic recovery and climate action can't go hand in hand. Investments in green building can be a key driver of the recovery and can provide a return on investment that will benefit Canadians like no other sector of the economy can. A multitude of benefits will materialize from green building investment: the creation of skilled jobs, an increase in low-carbon innovation, and buildings and homes that are healthier, cheaper to operate, more resilient and responsive to our shared environmental and climate change challenges. We look forward to taking this step forward with you.