



## Canada Green Building Council - Greater Toronto

January 28, 2019

Hon. Rod Phillips  
Ministry of Environment, Conservation and Parks  
Ferguson Block 11th Flr  
77 Wellesley St W.  
Toronto, Ontario  
M7A 2T5

### **RE - CaGBC Comments on "Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan"**

#### **INTRODUCTION**

The Canada Green Building Council (CaGBC) supports the Province of Ontario in its goals to protect the environment, reduce GHG emissions and create economic opportunity. Green buildings are one of the most cost-effective ways to reduce greenhouse gas emissions as well as save money for Ontario homeowners and businesses. Buildings represent significant potential for economic growth through innovation, investments and job creation. The Ontario building industry is one of the most advanced and capable in the world as demonstrated by their achievements, including the uptake of voluntary LEED and Zero Carbon Building certifications. The industry continues to be strongly interested in pushing forward with higher levels of performance.

We appreciate the opportunity to comment on the proposed strategy to provide constructive feedback on the discussions that relate to buildings on behalf of the green building industry in Ontario and Canada. What follows are the CaGBC's recommendations related to the built environment with a particular focus on how buildings can lead the Province in emissions reductions.

#### **ABOUT CaGBC**

The **Canada Green Building Council (CaGBC)** is a not-for-profit, national organization that has been working since 2002 to advance green building and sustainable community development practices in Canada through market-based solutions. We are an industry-led organization providing value-added solutions that benefit the environment, economy, and public health. Our in-depth market research and analysis, building certification program (LEED, Zero Carbon Standard), and capacity building efforts have accelerated the transformation to high-performing green buildings, homes, and communities throughout Canada. Our reach is enhanced by the work of eight provincial Chapters that provide regionally tailored market education and advocacy.





## RECOMMENDATIONS

### Recommendation 1: Zero Carbon Buildings by 2030

#### ***Establish building-specific performance goals progressing to zero carbon by 2030***

The proposed plan currently outlines Ontario's overall emission reduction targets, and attributed reductions to different programs. We suggest to also provide reduction targets for buildings. We recommend a clear goal of zero carbon for new construction by 2030, which our research shows is financially viable for the industry and will ensure that the industry continues to be competitive nationally and internationally. In February 2019 CaGBC will publish a detailed costing study of zero carbon buildings. This performance level also aligns with modelling scenarios performed under the City of Toronto Climate Plan, TransformTO, and municipal policies including the Toronto Green Standard and British Columbia's Energy Step Code.

Zero carbon building performance is possible today, as demonstrated by projects certified under the CaGBC's Zero Carbon Buildings Standard and the Canadian Home Builders' Associations Net Zero Homes program, among others. Not only are these buildings possible, but over the buildings' lifecycle they can be economically competitive with traditional construction.

Setting a goal of zero carbon provides clarity to developers, designers and builders about future performance expectations. It will provide them with time and certainty to assemble the expertise, develop processes, and make the investments needed to be successful.

#### ***Integrate Zero Carbon into the Ontario Building Code by 2030***

A lack of alignment between Provincial GHG targets and the Ontario Building Code (OBC) has also been a barrier for the building sector. Future versions of the OBC must align performance with GHG targets, including net zero by 2030.

### Recommendation 2: Enabling the Retrofit Economy

Much of the focus on high-performance buildings has targeted new construction and operational efficiencies of existing buildings. However, as shown in [CaGBC's Roadmap for Retrofits in Canada](#) we need to significantly increase the number and scale of energy retrofits in Ontario to meet our GHG emissions goals.

Retrofits represent a significant economic opportunity for Ontario by generating substantial capital investments and by creating jobs. In addition to reducing utility costs for tenants, they increase property values, can address health and safety issues and generate predictable positive financial returns for investors. The Province could support the development of a strong retrofit economy in a number of ways.





### ***Introduce financial instruments for the retrofit market***

CaGBC recognizes that financial incentives can be an important part of driving early adoption of innovations in the building sector. However, the long-term viability of the retrofit economy will require building up the market infrastructure to sustain and accelerate retrofit activities with recoverable investment. This includes unlocking private capital investment, and creating effective mechanisms for lending public funds such as the Ontario Carbon Trust. There are a number of financial measures that have already been established in other jurisdictions that could be rapidly implemented in Ontario to accelerate retrofit investment:

- **Property Assessed Financing:** Known as Property Assessed Clean Energy (PACE) financing or Local Improvement Charges (LICs), this mechanism allows energy conservation loans to be secured with a property lien and repaid by the owner through a special assessment on the property tax bill. Major benefits of this type of financing is the ability to extend amortization over a longer period, high debt security, and easy transfer of the debt when property is sold because the loan stays with the property, not the owner.
- **Energy Performance Contracts:** Investors finance energy efficiency retrofits and are repaid the revenues from energy savings.
- **Green Mortgages:** Increase the borrowing capacity of property owners to undertake retrofit projects and provide an interest rate incentive for energy savings.
- **Investor confidence project (ICP):** ICP is an increasing popular global standard for underwriting, developing, and measuring energy efficiency retrofit projects. It creates an industry trusted standard, methodology, and certification akin to that provided by credit rating agencies for investors in debt securities and help to support other green financing products.

The CaGBC can support the Province in securing strategic partnerships with industry and the financial community to establish the necessary market infrastructure for a profitable retrofit economy in Ontario. A tailor-made approach could be considered which assesses the financial needs of varying asset classes to determine the best use of incentives and related public funds.

### ***Building code requirements for existing buildings***

Currently there is no mandatory energy requirement for existing buildings, even when they undergo a major retrofit. We support the creation of an Ontario retrofit energy code that should include a GHG metric along with minimum energy thresholds. To be successful, a retrofit code for existing buildings must be integrated into a comprehensive provincial retrofit strategy that includes incentives, financing, capacity building, energy information, and performance verification. Thresholds for minimum energy performance of retrofits can be informed by public data collected through the Province's mandatory energy and water reporting and benchmarking program.

### ***Leverage mandatory Energy and Water Reporting and Benchmarking (EWRB) to maximize private and public benefit***

The CaGBC supports Ontario's EWRB regulation. Energy Benchmarking has been shown to be a highly effective driver of energy savings by providing building owners and managers with information on their own performance and competitive intelligence about peer performance. We recommend that the Ontario government support building owner and manager training, not only on how to comply with EWRB requirements, but also on how to leverage benchmarking data to drive performance improvements.





## Canada Green Building Council - Greater Toronto

Disclosure of energy and water data has a number of important benefits. It is critical to ensure that businesses and consumers are fully informed when making investment decisions to improve building performance. It also provides invaluable data for conservation organizations and agencies seeking the most efficient and effective strategies to reduce utility consumption in the market. This data can be used to create detailed market segmentation and opportunity mapping to improve program design and targeting.

### **Other Items**

In addition to these recommendations we support many of the ideas presented in the draft plan. Including:

- Roll out of the Green Button Standard to improve the efficiency of utility data collection for the purposes of building benchmarking and optimization.
- Promoting the switch to low-carbon heating systems.
- Supporting the development of renewable natural gas to help gas-heated buildings lower their emissions without costly heating system changes.
- Accelerated Capital Cost Allowance to make investments in new energy-efficient technologies more attractive.

### **Recommendation 3 – Workforce Development**

While investment in low-carbon buildings and retrofits in Ontario represents a significant economic opportunity, it can only be achieved if we have a strong construction workforce with the skills and capabilities needed to create energy-efficient, low-carbon, high-performing buildings.

In addition to upgrading the skills of new recruits and experienced trades, the construction workforce is aging and experiencing high attrition. It is estimated that 85,000 workers will retire over the next decade and nearly 150,000 jobs will need to be filled by 2030. High performance buildings can provide excellent employment opportunities in an innovative area with growing demand.

The construction sector is a major driver of Ontario's economy – 11.8% of GDP and 518,000+ jobs (more than any other productive sector). Failing to maintain and develop the capacity of the industry will affect the Province's economic growth in the following ways:

- Increased construction costs and longer timelines for development
- Lower quality work, poor building performance
- Fewer projects completed, resulting in loss of investment, GDP and tax revenue
- Lower employment and income tax revenues

The CaGBC report, *Trading Up, Equipping Ontario Trades with Skills of the Future*, identifies a skills gap for the construction ecosystem that needs to be addressed to scale up high performing buildings and retrofits to their full potential. The report will be launched on January 29, 2019 and is funded in part by the Government of Ontario.

- Along with technical skills, soft skills as well as changes to the market infrastructure need to be expanded to support the adoption of new technology and delivery of high-performing buildings.





## Canada Green Building Council - Greater Toronto

- In addition to skills development, improvements to green literacy through a holistic and integrated design approach that improves collaboration between all stakeholders in the construction ecosystem is necessary.
- The modes of training need to be amended to support diversity in training formats and access to education that addresses the gaps and needs of the industry. This also includes changes to the current apprenticeship system by adding specific skills to the curricula and by considering to make more apprenticeships compulsory.
- Market infrastructure needs to be adapted to support skills development, including adaptations to bidding processes and contract agreements to make low-carbon skills required and incentivize continuing education and training. Introducing a low-carbon certificate as well as making continuing education credentials mandatory would help achieve this objective.

### ***Training***

The CaGBC recommends that Ontario support and incentivize low-carbon skills training for new and existing trades and other professions of the construction ecosystem (architects, engineers, building officials) to increase the knowledge of high-performance building skills by leveraging government funds to subsidize training and lower the cost barriers for trades to participate.

### ***Curriculum Development***

The Province should also support the development of new curriculum that addresses training gaps and the skills that are needed. Low-carbon skills training should also be required and integrated into all available courses, including Ontario apprenticeship programs for people entering the construction industry to ensure high quality employment opportunities.

### ***Advanced Construction***

Finally, the Province should support new construction technologies, design approaches, automation and digitalization to develop new ways of constructing high-performing buildings that improve working conditions and worker productivity for trades.

## **Recommendation 4 – Government Leadership**

We applaud the Ontario government's leadership in adopting high-performance building best practices and encourage them to continue to demonstrate that leadership.

### ***Standards and Certification***

The CaGBC recommends that the Government of Ontario continues to deliver new public sector buildings and renovate existing ones to a high environmental standard for GHG emissions reductions, energy and water efficiency, recycling and material choices, health and well being. It is recommended to strengthen the mandate for government buildings to pursue LEED (Leadership in Energy & Environmental Design) Gold certification. LEED is the most widely recognized and rigorous third-party certification in Canada and globally. LEED certification will provide transparency to taxpayers that the government is delivering on its environmental commitments and, at the same time, produce year over year operating savings delivering on its promise to Ontarians to run an efficient government.





## Canada Green Building Council - Greater Toronto

### ***Lifecycle cost lens***

Currently, uptake of high-performance buildings in the public sector is hindered by rigid formulas that only consider first cost of construction. This often does not allow a project to fund investments in energy efficiency that generate enhanced lifecycle cost savings. Ensuring that all publically funded developments and retrofit projects are evaluated based on total life-cycle costs including both capital expenditures, and operating expenses will safeguard that public funds are spent to achieve the best outcomes possible.

### ***Data Platforms***

Innovation and risk management in the building sector is greatly supported by public data that is most efficiently collected at the Provincial level. CaGBC recommends that the Province support the development of data platforms that help inform private sector investment in building energy conservation, sustainability and resilience. These data tools include:

- The Energy and Water Reporting and Benchmarking program to drive energy efficiency in existing buildings;
- Climate change risk mapping to inform development and design decision making that mitigates financial and safety risks;
- Tools to help developers and building owners navigate regional conservation programs and funding opportunities.

### ***Ontario Carbon Trust – Buildings Stream***

The Ontario Carbon Trust represents a powerful tool to leverage public funds in support of both emissions reduction and economic growth. The CaGBC recognizes that different sectors have vastly different needs and capabilities with regard to funding and incentives. To best support the needs of the building sector, we recommend that the Ontario Carbon Trust include a dedicated funding stream for building-related projects. This will ensure that building projects are evaluated against comparable projects by type and scale and that program managers and the Carbon Trust are well informed with regards to the needs of buildings and appropriateness of investment opportunities.

## **CONCLUSION**

CaGBC supports the Province of Ontario in its goals to reduce GHG Emissions and create economic opportunities for Ontario businesses and better jobs for its citizens. In summary, we recommend that the Province:

- Commit to Zero Carbon Buildings by 2030
  - Establish building-specific performance goals progressing to zero carbon by 2030
  - Integrate those goals into Ontario Building Code energy requirements
- Support the Retrofit Economy
  - Introduce appropriate financial tools for Retrofits
  - Establish an energy code for retrofits
  - Leverage EWRB to improve public and private energy performance benefits
- Develop a strong low-carbon building workforce





## Canada Green Building Council - Greater Toronto

- Support and incentivize low carbon skills training for trades and other professionals of the construction ecosystem
- Integrate low-carbon building skills training into existing education, develop new training opportunities and amend the apprenticeship system
- Support investment in innovative construction methods and design approaches as well as in new technologies and digitalization
- Continue to demonstrate government leadership
  - Mandate that government buildings pursue LEED Gold certification for new and existing buildings
  - Adopt lifecycle costing for construction projects in development decision making to realize the biggest financial benefits to
  - Provide building data that supports private sector innovation and risk management
  - Create a focused stream for buildings under the Ontario Carbon Trust

We look forward to further discussing our proposal and recommendations with you in more detail. Please contact me at your earliest convenience to set up a face to face meeting

Sincerely,

A handwritten signature in black ink, appearing to read "T. Mueller".

Thomas Mueller  
President and CEO  
Canada Green Building Council  
100 Murray Street, Suite 400  
Ottawa, Ontario K1N 0A1  
tmueller@cagbc.org  
604 - 282 - 7811

