Advancements in Home Building Technologies

Submission to the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities

Engineers Canada

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Introduction

Engineers Canada thanks the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities for the opportunity to share our views on the role that the engineering profession must play in the advancement of new homebuilding technologies in Canada.

Engineers play an essential role in the building process by participating in the development of building codes and ensuring that various development scenarios align with them, meet local infrastructure requirements, and accommodate user- and site-specific engineering needs. Provincial and territorial engineering regulators hold these engineers accountable and keep Canadians safe.

As a profession, engineers have taken a leadership role in the economy and society in advancing critical principles of sustainability and efficiency, including by taking critical action to strengthen Canada's approaches to infrastructure adaptation, vulnerability and risk assessment, accessibility in design, and professional practices to improve resilience.

A safe, resilient, and accessible built environment

Engineers Canada welcomes recent efforts by the federal government to incentivize and directly introduce new housing supply.

That said, we believe that Canada's approach to expanding the use of innovative homebuilding technologies needs to incorporate the foundational principles of resiliency, climate change mitigation and adaptation, energy efficiency, and accessible readiness. To that end, we offer the following recommendations for the Committee's consideration:

- The Government of Canada should work with provinces and territories to ensure the adoption for housing of new resiliency, climate change adaptation, and accessibility objectives by incorporating these objectives into the National Building Code. By adopting these objectives into the building code, engineers will have expanded tools to drive sustainability practices into the development of new homebuilding technologies. This is especially important as Canada expands the use of pre-fabrication and pre-approved designs.
- Canada should also ensure that federal funding for infrastructure and housing projects enhances the resiliency of the built environment, including flood-proofing, protection against extreme heat and cold, air quality protection, wind-resistant design, storm protections, efficient water and wastewater systems, and other necessary factors for resiliency.

- The federal government should mobilize significant resources toward modernizing Canada's ability to produce and transmit energy to support goals related to GHG emissions in the building sector and to safeguard against risks to public health and safety.

The role of engineers in designing and implementing new homebuilding technologies

Public safety is at risk when engineers are not involved in the development and implementation of a wide range of legislation and regulations that require the application of engineering principles. To practise engineering in Canada, individuals must be licensed by one of the 12 provincial and territorial engineering regulators.

As the Government of Canada works with firms, provincial and territorial governments, and other interest holders to devote more resources toward advancing homebuilding technologies, they must recognize the important role that engineers play in upholding public safety. Self-regulation of the engineering profession protects and enhances public health, safety, welfare, the economy, and the environment for all Canadians. With this critical commitment to the public interest in mind, Engineers Canada recommends that the Government of Canada take the following actions:

- Ensure that engineers are properly involved in developing and implementing new measures to increase standardization of housing construction processes and expand the use of prefabricated materials.
- Ensure that new legislation, programs, and procurement efforts related to the advancement of homebuilding technologies require that engineering work only be undertaken by engineers who are licensed by one of the 12 provincial and territorial regulators.

About Engineers Canada

Engineers Canada represents the 12 provincial and territorial engineering regulators in Canada, which collectively license the more than 300,000 members of the engineering profession. As the only national voice for the engineering profession, we have a history of collaborating with the federal government to inform and develop legislation, regulations, and policies. We look forward to future collaboration with the Standing Committee on this and other important issues that impact the engineering profession.