



Briefing Note: Regulating GHG Emissions for Existing Buildings

December 2020

Purpose

This note aims to update the provincial government on the benefits of—and support for—new regulation that would target greenhouse gas (GHG) emissions from existing buildings. As buildings contribute approximately 11 per cent of British Columbia’s overall emissions, the province will need new policy in this sector if it is to meet its legislated climate targets to reduce province-wide GHG emissions by 40% from 2007 levels by 2030 and 80% by 2050.

Background

Building space and water heating is the province’s third-highest source of climate pollution after road transportation and the oil and gas sector.

- With the exception of the City of Vancouver, British Columbia’s local governments presently have few means of effectively limiting building emissions, which represent between 40 and 60 percent of their total GHG inventory.
- CleanBC commits the province to develop new standards for building upgrades by 2024; anticipated updates to the National Energy Code of Canada for Buildings (NECB) would guide the new standard.
- The 2016 Pan Canadian Framework on Clean Growth and Climate Change directs the federal government to develop a new model code for existing buildings by 2022.¹ If implemented and subsequently adopted by British Columbia, this code would help local governments guide energy efficiency improvements at the time of a building’s renovation.
- However, the above code would have limited impact on GHG emissions, because it is solely focused on energy efficiency. A more efficient building that uses fossil fuels to heat its space and water will continue to pollute significantly more than one that uses electricity or low-carbon fuel.
- Leading local governments are seeking new legislative changes that will enable them to directly limit allowable emissions from buildings within their jurisdiction.²

¹ Government of Canada. Pan-Canadian Framework on Clean Growth and Climate Change. “New Actions.” 2016. p. 17

² BC Climate Leaders. The Climate Leaders Playbook. <https://bcclimateleaders.ca/playbook/the-big-moves/where-we-live-and-work/>

Without this kind of measures, modelling done by Integral Group shows that the provincial government will not achieve its GHG emissions reductions targets.

- The November 2020 Mandate Letter to the Minister of Environment and Climate Change Strategy includes direction for the Minister to keep BC on track to meet its 2030 greenhouse gas emissions targets.

The Evidence Basis

A recent Pembina Institute report concludes British Columbia could reduce emissions from existing buildings by up to 60 per cent by retrofitting three per cent of the building stock each year, and also by converting half of those retrofitted buildings from fossil fuel heating to low-carbon energy sources, such as electricity.

- British Columbia briefly achieved this level of retrofit activity in the second quarter of 2009, the year homeowners were able to access both the provincial LiveSmart and the federal ecoENERGY retrofit incentive programs. On average, though, those combined programs yielded retrofits of just one per cent of eligible homes.
- This limited uptake aligns with U.S.-based research demonstrating that incentive- and information-based programs alone are insufficient to accomplish climate retrofit upgrades at the needed scope, scale, and speed.
- As most heating equipment is only replaced every 15 to 20 years or, in the case of building envelope improvements, every 40 to 50 years, retrofits must maximize GHG reductions along with energy savings. Delaying effective measures to reduce emissions will ultimately only increase the cost of achieving these savings. Delays will also make it more difficult for both the province and local governments to achieve their climate targets.
- According to a recent report by the American Council for an Energy-Efficient Economy (ACEEE), it is too early to point to a single best-practice approach for mandatory building performance standards. The ACEEE instead encourages individual jurisdictions to pursue an approach that works best for its communities. The report also points to actions such as building benchmarking and stakeholder consultation as important precursors to a standard.

Jurisdictional Scan

- Multiple jurisdictions already regulate, or are planning to regulate, minimum energy performance requirements for existing buildings; at least two—New York City and Tokyo—directly regulate building emissions.
- New York City’s Building Emissions Law, enacted in 2019, established emissions limits beginning in 2024 and increasing in 2030.³ This law requires

³ UrbanGreen. NYC Building Emissions Law Summary: Local Law 97.

owners of buildings larger than 25,000 square feet to report on energy use and make changes if they do not meet the requirements specified for their building type. There are exceptions to this size threshold, particularly in the case of affordable housing.

- In most cases, the jurisdictions require mandatory energy and/or GHG performance reporting as well as other measures to encourage and support proactive upgrades before they are required.
- The City of Vancouver has required prescriptive energy efficiency retrofit upgrades as part of its major building alterations permitting process since 2015. It is currently updating its zero-emissions strategy for existing buildings and is considering a transition to a regulatory approach based on minimum GHG performance.

British Columbia – Current State

The Province of British Columbia does not currently regulate greenhouse gas emissions from existing buildings.

- In 2019 and 2020, the Ministry of Municipal Affairs and Housing's Building Safety and Standards Branch conducted limited consultations on various approaches for a potential new standard for building upgrades.
- This consultation consisted of one-on-one interviews with a small number of key stakeholders; findings are not yet publicly available.
- The City of Vancouver is planning to establish GHG emissions performance requirements for existing buildings starting in 2025 as part of its Climate Emergency Plan that was approved by Vancouver City Council in November 2020.
- The Metro Vancouver Regional District (Metro Vancouver) is currently exploring minimum GHG pollution requirements for existing buildings under the Provincial Environmental Management Act.
- Should Metro Vancouver move forward with a GHG pollution standard for buildings, to ensure fairness and consistency, the provincial government may wish to enable additional local governments to use the tool.
- The set of recommendations advanced by the UBCM Special Committee on Climate Action includes a provision for the province to develop a retrofit code, which sets standards for low carbon building retrofits.

Next Steps

Potential next steps for government include the following actions.

- Release the findings from the first round of the government's recent consultation on a GHG standard for building upgrades.

- Expand and accelerate stakeholder consultation on a standard for building upgrades.
- Ensure that the issues being explored by the province include a GHG performance standard as well as the range of supporting measures (e.g., benchmarking, financing) needed to ensure a successful building upgrades policy.
- Work closely with leading local governments to ensure they have the skills and capacity required to implement a standard for building upgrades.
- Expand the CleanBC commitment to develop new standards for building upgrades by 2024 to include GHG performance standards, as well as energy performance standards.
- Establish a minimum energy and GHG performance standard for existing public sector buildings.