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Canada Needs Fiscal Incentives to Spur Better Energy Performance in Buildings

The Pan-Canadian Framework on Clean Growth and Climate Change sets 2030 as the deadline for provinces and territories to adopt a "net zero energy ready" model building code, and calls for a model building code for existing buildings by 2022.

To meet those deadlines and support wider, faster reductions in the sector's greenhouse gas (GHG) emissions, the federal government must set tax incentives that encourage a whole building approach to energy-efficient design and construction.

Buildings account for nearly 25% of Canada's carbon pollution, and those emissions are on track to increase by 23 megatonnes by 2030. But there's huge potential to reduce energy use and emissions in new and existing buildings—starting right now, with the right fiscal incentives based on GHG emissions intensity.

When an opportunity is missed in the building sector, the consequences are high. A new building has a lifespan of many decades. So if it isn't designed and built to the highest standard, it will continue dragging down Canada's carbon performance, pretty much for the rest of this century. Or it will join the very long list of structures that will require extensive energy retrofit over the next couple of decades.

That's why Canada's current piecemeal approach to building energy efficiency and emission reductions is such a serious impediment to meeting the country's climate objectives.

The Massive Opportunity in Energy Retrofits

Whole building energy efficiency incentives matter because there is such a massive opportunity to curtail GHG emissions across the sector.
The number of residential households in Canada is expected to grow from 14 to 17 million between 2013 and 2030, according to Environment and Climate Change Canada's *Second*

Biennial Report on Climate Change. Commercial floor space is on track to increase from 747 to 972 million square feet, and the sector's emissions are set to grow by 24.4%, from 86 to 109 megatonnes.

But a U.S. cost abatement curve developed by management consultants McKinsey and Associates in 2010 shows that building energy efficiency improvements are among the most affordable and cost-effective options to reduce GHG emissions through 2030. The big question is whether green building incentives in Canada are sufficient to drive the level of activity that is justified by building science, and demanded by climate science.

The Tax System: Falling Short on Energy-Efficient Buildings

There's no question that green building activity in Canada is on the rise. In a 2014 survey of a diverse group of engineers, architects, and building owners, the Canada Green Building Council (CaGBC) found that 50% of respondents expected more than 60% of their work to qualify as green projects by 2017. That was a significant increase from the 27% who expected the same level of activity in CaGBC's 2011 survey.

But the adoption of green building practices in Canada is still just a shadow of what it could be—and it's still not enough to bend the curve on the building sector's greenhouse gas emissions. CaGBC has identified four main barriers to wider, faster action:

- The lack of direct financial benefit for tenants and owners when buildings reduce GHGs
- Misperception of start-up costs that make LEED Platinum buildings only about 2% more expensive than conventional projects
- Low energy costs that will be offset somewhat by carbon pricing, but not quickly enough to have a decisive impact on green building activity
- Difficulties obtaining green building certification in small cities and rural areas.

Fortunately, the federal government has an easy opportunity to narrow the gap, just by adapting tax structures that are already in place.

An Easy Win

Canada offers limited tax incentives for energy-efficient retrofits. Extending the existing regime would be an easy win for the economy, and for the effort to meet Canada's 2030 climate objectives.

Classes 43.1 and 43.2 under the *Accelerated Capital Cost Allowance (ACCA)* regulations recognize capital investments in 15 different categories of equipment, including a handful—such as photovoltaic and geothermal systems—that would be useful in green building designs. The federal government does review and update the list of allowable equipment under Classes 43.1 and 43.2, but the process is slow enough that essential, state-of-the-art options like energy storage still aren't covered.

As well, the *Canadian Renewable and Conservation Expenses (CRCE)* regulations allow accelerated write-offs for start-up costs incurred by renewable energy and energy efficiency projects.

What's missing so far is a whole-building tax credit to encourage more builders to adopt more ambitious energy efficiency strategies, get ready for a net zero ready standard, and avoid locking in higher GHG emissions for decades to come. It's the key to a coordinated, integrated approach that unlocks the full potential in the drive for net zero buildings.

As far back as 2011, a Natural Resources Canada (NRCan) official recommended "incentives to cover the design process," to complement efforts to strengthen national building and energy codes. More than half a decade later, with carbon reductions at the top of the federal policy agenda, it's time to get it done.

A Pathway to Success

Tax provisions in the United States point to an easy pathway for Canada. Since 2005, the U.S. government has offered tax deductions totalling US$2.40 per square foot for specific building systems that reduce energy and power costs by at least 50%. Combined with state and county initiatives, the program has triggered a significant increase in green building activity and contributed to a more holistic approach to building energy efficiency.

Based on the U.S. experience, Canada should extend the existing *ACCA* and *CRCE* provisions by introducing an incentive of $2 to $3 per square metre for lighting, building envelope, and heating and cooling system costs that meet a specified energy performance threshold, based on energy use or GHG emissions intensity. NRCan or some other expert organization should decide the precise threshold, but Équiterre recommends minimum energy savings of 50% over building code requirements, steadily increasing to a net zero ready target, so that the incentive works to support the eventual regulatory requirement.

The precise cost and benefits of a whole-building incentive for both new and existing structures would depend on the design of the program. But there's little doubt that the incentive would benefit households, businesses, and the wider economy, while reducing greenhouse gas emissions by 0.5 to 3.0 megatonnes per year by 2030.

The cost of building energy retrofits is more than repaid by energy savings over time, freeing up cash for other uses and contributing to greater efficiency across the economy as a whole. If a modified, more targeted tax incentive is what it takes to surmount the perceptual barriers that inhibit wider, deeper green building activity, the investment is in Canada's best interest.