



Innovation Nation: Forcing net zero could harm Ontario economy

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Global warming and associated climate change resulting from man-made greenhouse gas emissions are a reality. Global action is necessary to reduce the impact of climate change and Ontario needs to make a substantial contribution to that effort.

But there's a problem that is currently the talk of Ontario's new housing industry: the Climate Change Action Plan (CCAP).



Here's the plan's ambitious recommendation regarding energy-efficiency requirements for new construction, specifically lowrise and midrise housing and other small new buildings:

“The government intends to update the Building Code with long-term energy efficiency targets for new net zero carbon emission small buildings that will come into effect by 2030 at the latest, and consult on initial changes that will be effective by 2020. Ontario will consult on how to best achieve these targets through Building Code improvements.”

It’s an admirable goal. However, there is no plan to get to net zero and it took only one paragraph to send shivers down the spines of builders across the province to produce new homes that will not produce greenhouse gas emissions.

NET-ZERO CARBON

Why? Because the added cost of making homes net-zero carbon – adding solar panels to the roofs and sides of homes, heavily insulated and nearly air-tight building envelopes, electrically powered space and water heating equipment, and more – will cost an extra \$100,000 per home, according to our estimates.

We have heard over and over throughout our industry that, without a logical and gradual step-by-step plan, this is an unreasonable expectation.

Frankly, new housing is an easy target for over-regulation. It isn’t new housing and buildings that aren’t performing up to snuff, it’s the existing stock, especially what was built decades ago.

We should note that the CCAP report acknowledges that the building sector emissions per square metre “improved significantly” between 1990 and 2012.

Actually, Ontario new lowrise housing is ahead of provincial greenhouse gas reductions targets set in accordance with the United National Framework Convention on Climate Change. Using 1990 as the baseline year, Ontario set an overall greenhouse gas reduction target of 37 per cent to be achieved by 2030.

ONTARIO BUILDING CODE

The Ontario Building Code has changed significantly between 1990 and 2017. In fact, Ontario is already a leader in energy efficiency in housing construction. The Ontario Building Code’s Supplementary Standard SB-12 includes very high performance requirements for energy efficiency, making Ontario’s standards among the highest in North America and comparable to those in much of Europe.

As a result of large improvements in the code’s energy-efficiency standards between 1990 and 2017, greenhouse gas (GHG) emissions from an average house have decreased by 43.5 per cent, while the CCAP’s target was a 15 per cent reduction by 2012, and a 37 per cent reduction by 2030. As you can see, by comparing Ontario’s 43.5 per cent improvement by 2017 to the 15 per cent target by 2020, new construction is already way ahead of the Ontario target.

Teresa Lopez, CEO and founder of Green Energy Money, a green mortgage broker from Texas, who spoke at a recent green building event in Thornhill, said that Ontario and Canada were already well ahead of U.S. building regulation on energy efficiency in housing.

Nonetheless, Ontario should continue to increase energy-efficiency standards in new construction – but this needs to be done in a balanced and rational way.

Also announced in the Climate Change Action Plan is Ontario's intention to join the cap and trade system under the Western Climate Initiative.

“It limits the amount of emissions that can come from the economy (the cap), and then allows those covered by the cap to trade among themselves (the trade) in a flexible and cost-effective way, thereby creating a price on carbon pollution. Cap and trade allows the market – not government – to set the carbon price. Cap and trade fights climate change by giving polluters an incentive to cut emissions, since they must pay for the pollution they are responsible for.”

SB-12

Considering a new lowrise home constructed in compliance with the 2017 SB-12 Building Code, a reference home was modelled to produce less than four tonnes of greenhouse gas emissions for space and water heating loads. With the cost per tonne of CO₂ trading around \$13 in September 2016, think of the annual monetary incentive for a new homeowner to adopt a net zero carbon home: \$13 times four, or \$52!

For context purposes, the U.S. Environmental Protection Agency found that a typical passenger vehicle emits about 4.7 metric tons of carbon dioxide (CO₂) per year.

Let's look at it from a global perspective: with Ontario accounting for only 0.4 per cent of global greenhouse gas emissions and the building stock accounting for only 19 per cent of Ontario's emissions, if new housing and buildings in Ontario did hit net-zero carbon, they would save the world a negligible 0.0008 per cent of greenhouse gas emissions. Considering the added cost to homebuyers, the numbers don't add up.

Like any regulation, building code requirements should be based on evidence and proven construction practices while taking into account cost-benefit analysis – as it stands, the cost-benefit analysis does not support the CCAP's targets for a net-zero approach to new housing.

We're not saying that substantial improvements in new home energy efficiency should not be pursued; even net zero may make sense at some point in the future. But we need a roadmap to get there that includes thoughtful public policy to help set out a plan and realistic, gradual targets along the way. It is an exercise in hubris to think that we can predict how technology and policy challenges will play out 15 years from now.

At the same time, government and industry stakeholders have to work together to find new ways of keeping new housing as affordable as possible.

If we don't do that and housing costs continue to increase too much, Ontario will lose its global competitiveness, leading investors to look elsewhere.

Until the government targets the existing housing stock – as we all know, new housing performs at a much more efficient level now than in previous decades – Ontario is wasting time and money by focusing on new construction.



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