

A Simple and Effective Climate Change Proposal

As Canadians head for the polls, climate change has emerged as a critical issue, and yet our politicians (of all stripes) are ignoring the easiest, the fastest, the least expensive and the most effective means of reducing greenhouse gas emissions – energy efficient buildings.

The design, construction and operation of our buildings accounts for at least 25% of Canada's emissions. It is now possible to create and even retrofit buildings so they are zero carbon – in other words they add absolutely no emissions to the atmosphere. If this standard were applied to all buildings in Canada then our emissions would be reduced by a full one quarter.

Such a project would be enormous and almost impossible in the short term, but the federal government could (and should) lead the way. The Canadian government owns, operates and/or leases 33 million square metres of space which consumes roughly the same amount of energy as the City of Surrey, BC. The current government hopes to be carbon neutral by 2025 but insists they will purchase clean energy to reach this goal. Deep retrofits would be a far more economical and beneficial approach.

Here's why: One in every 13 Canadians is employed in the AEC (Architecture Engineering and Construction) industry and these are jobs that can't be outsourced to other countries. Buying solar panels or wind turbines from other countries doesn't really create a lot of economic activity in Canada but retrofitting that much space would create thousands of high value jobs for Canadians.

Moreover, this project could also be used as a testbed, showcase and demonstration site for new home grown green building products and services ranging from biocomposite insulation to wireless sensors for monitoring building performance to blockchain for protecting the data generated by those sensors. Given that by 2021 the construction industry is projected to have a value of \$24 trillion US, this represents a huge export opportunity for any country that brands itself as a leader in green building design and construction, and which can offer the products and services to support that claim..

This entire market is ripe for disruption and a concentrated effort to use new technologies to combat climate change could also help drag it into the 21st Century with dramatic improvements to its productivity.

The productivity benefits, however, don't stop there. Energy efficient buildings are healthier buildings. Natural light, for example, has been shown to reduce absenteeism and improve productivity. Imagine the increase in productivity if this approach was applied across the entire country.

In short, a nationwide initiative in deep retrofits would not only dramatically reduce our country's greenhouse gas emissions but would have significant long term economic, societal and health benefits as well.

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