

Woodworking Network **IN**



Tall Wood Buildings Not So Great, says Concrete Industry

By [Bill Esler](#) August 31, 2015 | 12:12 am EDT

OTTAWA - Quebec Government's decision to allow the construction of taller wood buildings on the basis of a new wood industry construction guide that is not recognized by the National Building Code of Canada (NBCC) circumvents the exceptional building code approval process that exists to ensure the safety of all Canadians, says the Canadian Precast/Prestressed Concrete Institute.

Why is Quebec Government Allowing Construction of Taller Wood Buildings?

We may recall the Canada (CDN)-United States (US) Softwood Lumber Dispute where the US decided to level the playing field and which reduced Canadian Softwood Lumber exports drastically to the US. Since then, Canadian wood industry lobbyists have been looking for new marketplaces and touting the economic benefits of taller wood buildings to governments. So much so, that they are willing to legislate the use of wood and bypass the building code process.

When the Quebec (and other provincial governments) favour one building product (wood) over others and start promoting the economic benefits to Canadians (which there are none) it is just taking business from one industry to give to the wood industry - and that is called "unfair business practices".

The Problem with the Quebec Government Decision

Many research reports by third party independent consultants show that concrete buildings have a very low total cost of ownership (life cycle costing) owing to their exceptional longevity and low maintenance. Other less proven materials and systems can offer cheap solutions at the outset but in the long term can result in extensive damage and costs - Let's not forget the Vancouver leaky condo crisis in the 1980's - decisions should be made on the total cost of ownership, not the cheapest initial price.

The concrete industry has conducted a number of Life Cycle Assessment studies to determine their environmental footprint. The Life Cycle Assessment of Precast Concrete Commercial Buildings by the Athena Sustainable Materials Institute and Morrison Hershfield (2012) demonstrates that a precast concrete envelope with a concrete structure provides the lowest GHG and Total Primary Energy (TPE) impacts over 60 years of operation. This is largely due to concrete's ability to store energy and release it to the inside environment (a process called thermal mass).



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Further, the Athena and Morrison Hershfield study showed for a typical building in a cold climate like Quebec, operating energy accounts for upwards of 90% of the environmental impact of the building over its lifetime. So, any industry that touts its low environmental footprint and only accounts for the construction phase, and ignores operating energy, is just fooling the public, and the governments.

We have already heard the insurance industry expressing their concerns of insuring these structures, not only during occupancy but also during construction. Fires have destroyed several multi-storey wood buildings under construction over the last five years. Incidents in British Columbia, Ontario, Edmonton and Calgary have demonstrated how dangerous and unsafe wood-frame buildings under construction can be if proper precautions are not taken. Proper fire protection, during construction, will add thousands of dollars to the cost of these buildings; money which is simply charged back to the new homeowner.

The above notwithstanding, the insurance industry also has concerns with mold issues in mid to higher storey wood buildings - so much so that many building envelope experts are highly recommending that all wood buildings be tarped during the entire construction period to reduce the risk of future mold growth during occupancy; a process that is already common in Europe and will add a major cost to wood construction.

Finally, there is the issue of off-gassing and the related health problems from many of the glues, formaldehyde and VOC's used in laminated wood buildings products, especially when they burn. The new guide developed by the Régie du bâtiment du Québec and FPInnovations, a private research centre dedicated to supporting the Canadian forest industry, was voluntarily pulled from the 2015 edition of the National Building Code of Canada (NBCC) by its authors; perhaps they knew it wouldn't pass the rigorous building standards process. Is that an indication of problems to come?

CPCI believes that the Quebec Government is incorrectly over-stepping the national and provincial building codes and standards developed by accredited organizations in order to directly support the wood industry - to the possible detriment of public safety. Construction issues should be left to experts and not to politics.

About the Canadian Precast/Prestressed Concrete Institute

The Canadian Precast/Prestressed Concrete Institute is the body of knowledge and prime source of technical information about precast prestressed concrete in Canada. The Institute's interest is to stimulate and advance the common interests and general welfare of the structural, architectural and specialty precast concrete industry, including the safety and welfare of the Canadian public.

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