



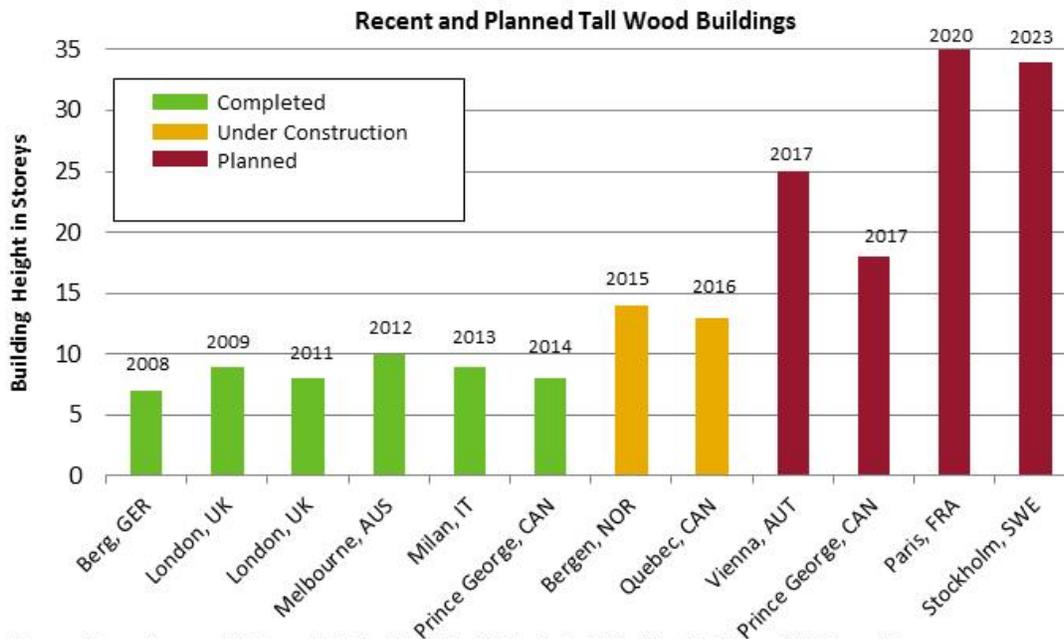
Tuesday, June 23 2015

**Use of Engineered Wood in Large Buildings**

Engineered wood products are being used to replace traditional building materials such as steel and concrete with greater frequency. This is partly due to recent advancements in wood product technology and greater use of wood products in “green” buildings (e.g. Passive House, R-2000, etc.) as a renewable building material. Products such as cross laminated timber (CLT), Glulam, I-Joists, specialty panels and structural composite lumber all fall under the engineered wood category. Interest in tall wood buildings continues to grow. Moreover, where current North American building regulations generally restrict wood buildings to approximately 5 or 6 stories in height, upcoming Canadian and U.S. code revisions are likely to open the door to larger and taller wood structures

The use of wood products can sequester carbon dioxide for years: as they grow, trees take in atmospheric carbon and sequester, through photosynthesis, between 1.8 to 2.0 tCO<sub>2e</sub> per tonne of dry wood, depending on wood species. The choice of building material is one of the key components of LEED (Leadership in Energy & Environmental Design), a green building certification program that recognizes best-in-class building design and operations. There are currently over 1,700 LEED-certified projects in Canada and more than 5,000 in the US, including the renovations to the Empire State Building in New York City: the number of new projects is increasing each year.

The graphic below shows recent tall wood buildings that have been built, that are under construction or that are planned to be built. The increasingly taller buildings demonstrate a greater acceptance for these types of structures. In late May of this year, a Vancouver architecture firm submitted a design proposal for a 35-story wooden tower to be built in Paris, which would be the world’s tallest wood structure. Additionally in late May, in another boost for timber high-rise construction in North America, the American Wood Council (AWC) was awarded a US\$250,000 grant to research fire performance of mass timber buildings. This trend, combined with the increase in popularity of “green” building certification and more energy-efficient building construction standards should result in a noticeable growth in the demand for engineered wood products.



Sources: Canadian and US Green Building Councils, APA, Sustainability, Wood Solutions, KSH Consulting.

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