Canadian Wood Council / Conseil canadien du bois

WOOD WORKS! engineered for strength and style...naturally!

QUICK FACTS - SUSTAINABLE BUILDING SERIES 3

WOOD and the Greening of Residential Buildings

BACKGROUND

The objective of green building programs is to stimulate improved environmental performance of buildings.

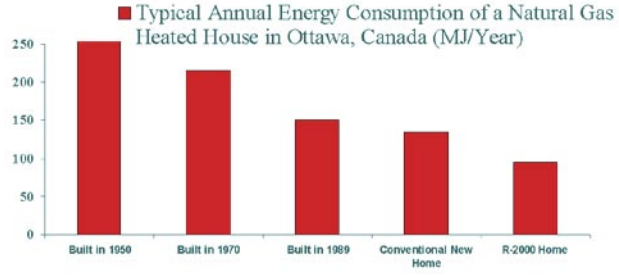
There are a number of voluntary green building programs in Canada that address several environmental issues, but because of concerns about greenhouse gases and their effect on climate change energy conservation is a primary focus.

The primary model used today to meet objectives of energy conservation and healthy indoor environment is the R-2000 program, which was launched in 1984 by the Canadian Home Builders' Association and Natural Resources Canada (NRCan). R-2000 homes typically use 30% less energy than non-R-2000 homes and are built to conform to strict standards for energy efficiency.

ISSUE

Though there are several residential environmental initiatives in Canada, the environmental impact of individual building materials is not addressed in detail in these initiatives. In some cases, "pick lists" provide material choices, however, there is no quantifiable assessment of the impact that these choices have on the environment over the life cycle of the materials.

In North America, wood is the standard structural component for most houses and small buildings. Wood is thermally efficient, easy to insulate, and is the only major building material that is renewable. Wood structures are proven to be among the safest building systems in an earthquake and in areas that face a risk from high winds.



In 2003, an NRCan life cycle assessment study demonstrated R-2000 compliant construction has reduced operating energy consumption by 40% when compared to the same house as it would have been built in the 1970s.

WHAT YOU NEED TO KNOW

The following is a thumbnail sketch of currently available programs in Canada:

The R-2000 Program deals with the "house as a system," addressing the relationship between energy conservation and indoor air quality. R-2000 homes are built to conform to strict standards for energy efficiency and must meet "pass/fail" criteria to qualify for certification. The program is owned by the federal government and administered nationally through provincial delivery agreements.

The EnviroHome Initiative provides marketing support to CHBA member builders for R-2000 show homes that comply with additional environmental criteria. (i.e. related to lighting and specific environmental measures).

The Super E House Program is based on the principles of R-2000 and intended for export use only.

Novoclimat is the program initiated in Quebec based on R-2000 principles. This program is more prescriptive.

The EnerGuide for Houses Program was initiated by NRCan with support from CMHC, and includes an energy efficiency label rating system to allow comparisons with other houses (both new and existing). It also includes some aspects of ventilation and combustion management.

Built Green Alberta was set up by the Calgary Home Builders Association to deliver the EnerGuide for New Houses Program, along with additional features related to indoor air quality, resource use and environmental impact.

The BREEAM Green Leaf for Multi-Residential Buildings assessment methodology is based on the internationally recognised BREEAM, originally developed in the U.K. in the 1980s. Buildings are assessed with respect to six environmental issues ranging from environmental management to dwelling unit criteria.

The Energy Star program was introduced in 1995 in the U.S. and is currently in use in Canada for windows and appliances only. In January 2005, NRCan launched a pilot project to introduce the Energy Star for New Homes label in Canada.

The U.S. offers other programs including the NAHB (National Association of Home Builders) Green Home Building Guidelines that was launched in the U.S. in January 2005. The U.S. LEED (Leadership in Energy and Environmental Design) Homes is currently in the development stage.

FOR MORE INFORMATION

Visit the Canadian Wood Council's website at www.cwc.ca.

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