



feel good.ca

about Canadian pulp,
paper, and wood

building green with wood

As concern about their environmental footprint grows, consumers want to know they are making well informed buying choices, and living in a way that puts less pressure on the Earth.

Canada's forest sector makes sure its wood, pulp and paper products are the result of responsible forest and production practices. Harvested areas are regenerated promptly, and Canada's tough forest regulations met. Companies welcome outside scrutiny of practices, participate in recovery and recycling, and promote carbon neutrality across the value chain. Buyers can be confident that today's quality products from Canada won't come at the expense of tomorrow's forests.

Looking for suppliers who commit to and deliver on these principles is an easy and effective way to choose responsible wood, pulp and paper products.

Building professionals who care about the environment are choosing wood products for green construction – both new structures and renovations. Wood grows naturally, using solar energy; it is recyclable and renewable. Wood products need less energy to extract, process and transport, and wood buildings can require less energy to construct and operate over time.

The environmental benefits are further strengthened when the wood comes from a jurisdiction like Canada that has advanced wood manufacturing technology and sustainable forest practices, backed by third-party forest certification.



scan this code
with your smart phone
for more information

Building with wood was an important part of the green legacy of the 2010 Winter Olympic and Paralympic Games in Vancouver. It is estimated that using wood in place of other materials for Olympics venues yielded a total carbon dioxide benefit of about 25,000 tonnes based on greenhouse gas storage and avoided emissions. This is the equivalent to the annual emissions from almost 4,800 cars.



benefits of building with wood

Research shows that wood products need the least amount of energy to manufacture, and that this process has the lowest impact on air and water quality. Using wood can offset climate change since trees absorb carbon dioxide as they grow, and the resulting products continue to store much of this carbon for decades or even centuries. In North America, a typical wood-frame home stores 29 tonnes of carbon – this represents the amount of carbon dioxide emitted by running the family car for five years.

Wood has low thermal conductivity and good insulating properties, and light wood-frame technology lends itself readily to the construction of buildings with low operating energy. It also has lower embodied energy – the energy required to extract, process and install raw materials, maintain and replace them through the life of the building.

Since the mid 1990s, energy performance has improved so embodied energy contributes more to the total life cycle consumption. Studies such as the U.S. LCI Database Project, undertaken by the ATHENA Sustainable Materials Institute, have consistently demonstrated that buildings built primarily with wood will have a lower embodied energy than those built primarily with brick, concrete or steel.

A study conducted for the Canadian Wood Council compared the environmental impact of a typical wood-frame house to that of similar houses built with steel or concrete poured into insulated forms. It looked at the total embodied and operating energy consumed over a 20-year period for each building type. Compared to

wood construction, steel and concrete embody and consume 12 per cent and 20 per cent more energy, emit 15 per cent and 29 per cent more greenhouse gases, release 10 per cent and 12 per cent more pollutants into the air, and generate 300 per cent and 225 per cent more water pollutants.

The best environmental choice is to use construction materials that are durable enough to last the lifetime of the structure, and can be reused or recycled once its useful life has ended. Wood is durable, and wood-frame buildings can be easily adapted to meet new needs and extend their life. After decades or even centuries of use, wood can be reused in new buildings – and this requires little or no energy. Canada's CO2 Neutral Alliance has created a website at dontwastewood.com listing resources aimed at keeping wood waste out of landfills.

Comparative studies reveal that there is virtually no waste during the manufacture of wood products. Waste wood can be burned for energy, replacing the use of a fossil fuel. Engineered wood products that

“Wood offers us many things but arguably the simplest and most important today is that, unlike the structural resources of concrete or steel, wood has the capacity to make an enormous positive impact on climate change.”

*Michael C. Green, Principal,
mgb ARCHITECTURE + DESIGN INC
North Vancouver, British Columbia, Canada*

bond together smaller pieces of wood or wood fibre offer a high-performance, consistent, reliable and environmentally responsible choice for any project, large or small, residential or commercial.

The warm and natural attributes of a wood design generate positive feelings, and evidence suggests this can contribute to an individual's overall sense of well-being. In an office or school, this can improve performance and productivity. Wood floors contribute to better air quality by minimizing the accumulation of dust and microbes.

green building tools

The variety of tools available to support green building concepts and practices must be evaluated carefully to ensure they will meet the specific needs of each application to yield the highest impact.

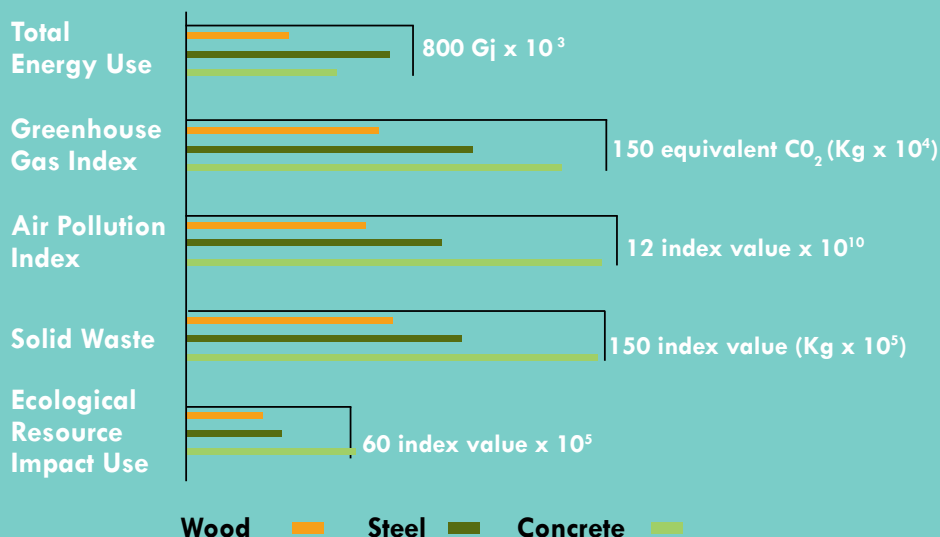
Green building rating systems award credits for design, materials and techniques that support green design. Examples include BREEAM (United Kingdom), Built Green Canada, Casbee (Japan), Green Building Assessment Protocol for Commercial Buildings (ANSI/GBI 01-2010), Green Globes (Canada and the United States), Green Star (Australia), Leadership in Energy and Environmental Design (LEED 2009) The National Green Building Standard (ANSI/ICC 700-2008). Most rating systems give credits for using wood that is third-party certified, for using local materials, or for avoiding waste. Each has a certain percentage of credits that relate to wood.

how rating systems relate to wood

Green building codes and standards created by standards development organizations establish minimum requirements for elements of green building. In some cases, codes are written so local governments can adopt them as bylaws to reduce the local environmental impact of buildings.

Third-party forest certification can improve forest practices and promote sustainable forest management by offering assurance that wood products come from legal and responsible sources. Canada has more certified lands than any other country – just 10 per cent of the world's forests are certified, and 42 per cent of these certified lands are in Canada. Green building rating systems offer credits for the use of wood products that are third-party certified. Most allow credits for products certified to the three globally recognized forest certification programs used in Canada --- the Canadian Standards Association, the Forest Stewardship Council and the Sustainable Forestry Initiative.

COMPARATIVE LCA, THREE CONSTRUCTION SYSTEMS



Source: Comparing the Environmental Effects of Building Systems. Canadian Wood Council



resources:

Forestry Innovation Investment

Building Green and the Benefits of Wood
http://naturallywood.com/uploadedFiles/General/Green_Building/Building_Green_and_Benefits_of_Wood.pdf

Green Building Rating Systems and How They Relate to Wood (summary)

http://naturallywood.com/uploadedFiles/General/Header/Green%20Rating%20System_FINAL.pdf

Building Green with Wood Tool Kit.

www.naturallywood.com/Green-Building/Green-Building-Tools/Building-Green-with-Wood-Tool-Kit.aspx

Forest Products Association of Canada

Canadian Wood. Renewable by Nature. Sustainable by Design.

<http://www.fpac.ca/index.php/publications/publication-viewer/166/>

Tackle Climate Change, Use Wood.

<http://www.fpac.ca/index.php/publications/publication-viewer/372/>

Other resources

Build Green with Wood Forum
www.buildgreenwithwood.com

Canadian Forest Service
www.cfs.nrcan.gc.ca

Canadian Wood Council
www.cwc.ca

Planet Friendly Canada Portal
www.planetfriendlycanada.com/

FPIInnovations - Forintek
<http://www.fpinnovations.ca/>

feel good about canadian pulp, paper, and wood.

With responsibility for 10 per cent of the world's total forest cover, Canada manages its diverse lands and produces quality forest products in a way that meets the highest environmental standards.

Choosing wood products from Canada means using an environmentally sustainable product that is better for the environment than steel, plastic or concrete. Choosing pulp and paper from Canada means using products from the one of the most environmentally responsible sources in the world.

Canada's forest products industry is poised to continue to contribute significantly to the greening of society.



To learn more, visit feel-good.ca.



scan this code
with your smart phone
for more information



Forest Products
Association of Canada
fpac.ca