

© Photo : Stéphane Groleau

The **WOOD** CHARTER

Wood: The Raw Material for Responsible Development



**"LET US GIVE
WOOD THE
PLACE IT
DESERVES!"**

Today, the Wood Charter has become a recognized Government undertaking. More than ever before, increasing the use of wood in construction is regarded as a priority by the Québec Government.

The Wood Charter provides real guidelines that help in the fight against climate change while creating jobs and wealth in our forest communities. It reflects not only the ongoing nature of our efforts to support the forest industry, but also, and mainly, our intention to transform the forest sector into an innovative and stimulating industry.

The Wood Charter constitutes an opportunity for us to innovate by using wood in new markets, such as non-residential, commercial, industrial, institutional and multi-family construction, with a view to achieving sustainable development. It fosters market diversification of wood products and their conversion into high-performance engineered products.

To meet the many challenges of using wood in construction, the Québec Government continues to set an example by introducing measures relating to Government leadership, the construction of taller mid-rise and tall buildings, training, research and innovation.

In doing this, the Government has undertaken to continue its efforts to ensure that wood is given the place it deserves in non-residential, commercial, industrial, institutional and multi-family construction in Québec, by ensuring that the right material is used in the right place.

Laurent Lessard
Minister of Forests, Wildlife and Parks

The Wood Charter

TARGET SECTOR: NON-RESIDENTIAL,
COMMERCIAL, INDUSTRIAL,
INSTITUTIONAL AND MULTI-FAMILY
CONSTRUCTION

Main aims:

- to increase the use of wood for construction in Québec;
- to create and consolidate employment in the regions;
- to reduce greenhouse gas emissions;
- to develop higher value-added wood products; and
- to enrich Québec as a whole.

Why use wood for construction?

WOOD: A TOOL IN THE FIGHT AGAINST CLIMATE CHANGE

Throughout the world, the construction sector generates roughly one-third of all greenhouse gas emissions. Most of a building's environmental impacts occur during use. However, with current insulation techniques, the same energy performance levels can be achieved regardless of the type of material used. The rest of the sector's emissions are generated mainly during the production, processing and transportation of building materials.

Wood, however, comes from our forests. It is created from solar energy, and only a small quantity of additional, mainly renewable, energy is required to convert it into useful products. When wood is used in construction instead of other materials that are produced using large quantities of fossil fuel, the emissions from the production process are greatly reduced.

In addition, trees are able to capture CO₂ – a greenhouse gas that is partly responsible for climate change – and store the carbon from it. The forests therefore become vast sinks for atmospheric carbon, which is stored in the wood. This carbon remains in the products made from that wood, throughout the time they are in use. In fact, the amount of carbon contained in many wood products is greater than the amount emitted into the atmosphere when they are produced. Recycling and reuse of wood extends the carbon storage period.





THE WOOD CHARTER MEASURES

1. GOVERNMENT LEADERSHIP

The Government, as a major order-giver, must lead by example in the use of wood in construction. In other words, in every project financed wholly or partly by public funds, the project manager must consider the possibility of using wood before the project begins, and must carry out a comparative analysis of greenhouse gas emissions for different materials. For example, promoters of construction or expansion projects for cultural, community, municipal, education or sports buildings cannot obtain government subsidies unless they perform this comparative analysis.

A greenhouse gas emission measurement tool, which uses the tried-and-tested life cycle analysis method, is available to all professionals who wish to compare wood with other construction materials. The tool is reliable, effective and easy to use, and produces objective, standardized results that are easy to compare.

A high-level inter-ministerial committee composed of representatives from the main Government departments, order-giving agencies and construction sector organizations is responsible for implementing the Wood Charter. Committee members must ensure that their respective departments or agencies promote the Wood Charter, in particular to their partners.

2. CONSTRUCTION OF MID-RISE AND TALL BUILDINGS

Construction of mid-rise buildings (five or six storeys) and tall buildings (seven storeys or more) can help limit the problem of urban sprawl currently faced by most municipalities.

The Régie du bâtiment du Québec recently amended Québec's Construction Code to foster the construction of mid-rise buildings. As a result, wood can now be used to construct buildings of up to six storeys that will be used mainly for residential or business purposes.

The Government also wishes to encourage developmental wood construction projects, and to show that, with the innovative new wood products and building systems now available, wood can be used to construct tall buildings (ten storeys or more). Its aim in doing this is to allow for the development of technical expertise that will serve as a basis for the emergence of new projects.

A further aim of this measure is to promote the use of wood in combination with other materials, and the use of appearance wood products. The chosen approach is the use of the right material in the right place.

Why use wood for construction?

WOOD: A LOCAL, RENEWABLE, SUSTAINABLY MANAGED RESOURCE

The forest is a ubiquitous element of Québec's culture and identity. It is a source of pride, wealth, stimulating employment and development in every region of Québec. Lumber is derived mainly from the commercial boreal forest, which is managed sustainably so as to maintain or improve the long-term health of the forest ecosystems. Most of Québec's public forest land has been certified by one of the three existing forest certification systems.

Certification is an independent, impartial process that confirms the use of sustainable forest management practices. Its principal merit is to encourage ongoing improvement of forestry practices.

The choice of wood as a building material is also a choice to use a local resource and play a role in the social, economic and environmental development of Québec.

© Photo : Cecobois

3. TRAINING AND PROMOTION

Wood construction training for the sector's professionals must be improved. At the present time, very few universities in Québec teach good wood use practices to their future engineers and architects. The Government therefore hopes to work with universities to introduce mandatory training on wood as a construction material for these new construction sector professionals.

In addition, the Government hopes to improve professional development training on the use of wood in non-residential and multi-family buildings, so that professionals and tradespeople alike have access to the most recent information. Working professionals need new skills to cope with the emergence of new engineered wood products and the recent amendments to Québec's Construction Code. To complete their training, they will also be given proper technical tools to facilitate their design work and encourage the use of wood as a construction material.

4. RESEARCH AND INNOVATION

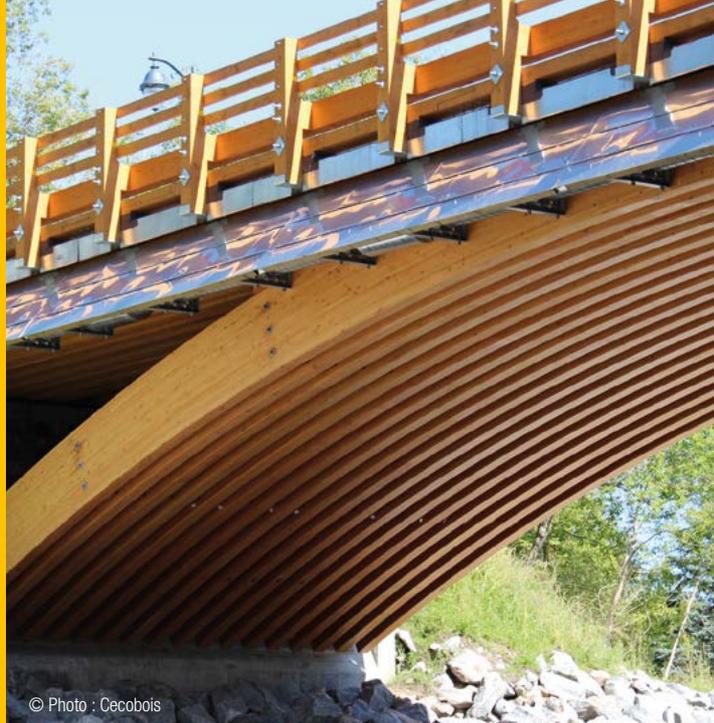
To support an innovative and dynamic wood construction sector, it is important to foster the development of local research expertise and encourage the transfer of knowledge and technology. Research and development are needed to support the design of mid-rise and tall buildings, since a global approach to building systems is required in order to obtain good thermal, acoustic, mechanical and other performance.

To promote an innovative approach to the use of wood in construction, the Québec Government will support research and development activities in the construction sector. Its aim in doing this is to support eco-responsible wood construction and improve the competitive capacity of wood construction sector firms through innovation.

Why use wood for construction?

WOOD: A HIGH-PERFORMANCE MATERIAL

On a weight-for-weight basis, wood is the most resistant of all structural materials. In spite of human know-how and technology, it has not yet been possible to design a material that performs as well, technically speaking, as wood. Wood is produced from trees, and is flexible, lightweight and resistant. In addition, contrary to popular belief, the low thermal conductivity of wood allows it to maintain its load-bearing capacity for longer than other materials in fires. The heat spreads more slowly through the wood, and its temperature increases less quickly.



© Photo : Cecobois

Did you know that:

- Based on information from building permits, the annual value of the non-residential buildings that could be built from wood in Québec is more than \$4 billion.
- By using wood for its own construction projects, the Government officially supports the principles of sustainable development set out in its Sustainable Development Strategy.
- Roughly 85% of professionals surveyed thought there should be more emphasis on the use of wood as a construction material in university engineering and architecture faculties.
- There are currently plans to build a 13-storey wooden building in Québec City. Twelve of the storeys would be built from heavy timber, making it the largest wooden building in North America.
- On average, one cubic metre of wood absorbs the equivalent of 1 ton of CO₂ from the atmosphere.

For further information, please contact:

Ministère des Forêts, de la Faune et des Parcs
Direction du développement de l'industrie des produits du bois
5700, 4^e Avenue Ouest, Suite A-202
Québec (Québec) G1H 6R1
418 627-8644
CharteduBois@mffp.gouv.qc.ca

Forêts, Faune
et Parcs

Québec 