

# rebuilding

## NEW BRUNSWICK

New Brunswick Value-added Wood Sector Strategy  
2012-2016

*growing together*

New  Nouveau  
**Brunswick**

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## Sector Definition

The value-added wood sector includes companies which add value to hardwood or softwood by further manufacturing or processing. This includes lumber, pulp and paper, tissue, re-manufactured products, engineered products, appearance products, and products derived from wood biomass.

## Industry Overview

The province's value-added wood sector includes more than 200 company locations and employs approximately 10,600 people. The sector builds on close to 500 forestry and logging operation locations which employ another 3,400 people (2011). The value-added wood sector generates about 4.4 per cent of New Brunswick's Gross Domestic Product; \$969 million during 2011 (2002\$). Exports in 2011 amounted to \$1.522 billion, over 10 per cent of total merchandise exports. In addition, there is a significant indirect impact given the industry's strong linkages with other sectors of the economy such as metal fabrication, transportation and distribution, and professional and technical services.

New Brunswick companies are recognized leaders in the forest industry. Mills produce a wide range of products, from building materials to pulp and paper products. Globally, the forestry industry has faced soft market conditions and a number of businesses have exited the market in recent years. In a 2008 report on forestry prospects for New Brunswick, Don Roberts of CIBC World Markets described the industry as being hit by a "perfect storm" of adverse conditions. To stabilize the industry and reposition for growth, both levels of government have invested over the past few years to help the industry increase productivity, improve efficiency and open up new markets. While the state of the market in the United States (US) remains fragile, global fundamentals are favourable as wood supply is decreasing while demand is growing.

The future of the forest industry in New Brunswick is dependent upon the ability to utilize and extract value from the entire tree. In the past, there was a strong relationship between lumber and pulp and paper production; wood chips from sawn lumber were used in the production of pulp and paper. Though this co-dependency still exists to some extent, operational efficiency is dependent on transforming by-products into additional value streams such as bio-fuels, bio-chemicals and bio-products. Utilizing the entire tree and using all parts in the most efficient and profitable manner is key to sustaining the province's forest industry.

In addition to generating more value from previously underutilized by-products, wood fibre has properties that make it an attractive material in an environmentally conscious world. Compared to the other major building products, wood has a lower carbon footprint than both steel and concrete. Wood consumes the least amount of energy to produce, and rather than create net carbon dioxide emissions, it actually serves as a carbon sink.

The provincial government and other partners can spur the development of “green” products for export and domestic use, and encourage companies to become more innovative. It is reasonable to consider replicating the experience of the small, Austrian town, Güssing, and create a “Sustainable Forest-Based Community” in rural New Brunswick. Güssing is the first community in the European Union to cut carbon emissions by more than 90 per cent using, in part, technology which uses steam to separate carbon and hydrogen from scrap lumber to make a form of natural gas. The gas in turn fuels the city’s power plant. This development has attracted a steady stream of scientists, politicians and eco-tourists.

Policy development could increase domestic usage of wood products. For example, by setting a carbon footprint for public buildings, the government could require buildings to be designed and constructed to meet these minimum standards. Research and innovation can also be used to help traditional firms identify new value streams.

A review of the value-added wood sector in New Brunswick reveals the following main strengths, weaknesses, opportunities and threats (SWOT).

### **Strengths**

- Geographically well-positioned to serve European and North Eastern American markets
- Strong Canadian brand recognition in international markets
- Sustainable Forestry Initiative (SFI) certification of all Crown and industrial freehold lands
- Access to Acadian forest species with inherent structural strength qualities and diverse forest species to support a wide array of specialty product markets
- Prominent research and teaching institution

### **Opportunities**

- Growing market demand for system-built housing as incomes increase in emerging countries such as China
- Growing demand for “green” building products as consumers become more environmentally conscious
- Demand for renewable energy sources such as wood pellets
- Conversion of traditional production lines using emerging technologies in fields such as bioscience

### **Weaknesses**

- Heavy dependence on US market
- Lack of Forestry Stewardship Council (FSC) certification as required by select markets
- Loss of critical mass in sawmills
- Loss of workers in harvesting and low uptake of sector jobs by youth
- High cost of energy and transportation
- Aging workforce
- Few companies investing in research and development for new products

## Threats

- Expiry of the Softwood Lumber Agreement and protectionist trade policy in key markets
- Loss of domestic and traditional market to low cost imports
- High public demand for increased area set aside for non-timber objectives

Key drivers for growth and change in the wood industry are:

- the consumer trend towards green products and services
- global demand for system-built housing and building products which decrease construction time and on-site waste
- emerging technologies around biomass and its most cost-efficient use
- demand for sustainable and renewable energy
- global decline in wood availability as demand increases

In order to take advantage of these key drivers, industry and government must focus on:

- market diversification
- product diversification
- enhancing productivity and competitiveness
- understanding and utilizing emerging technologies
- positioning the New Brunswick wood industry as a world leader in sustainable production systems
- developing timber objectives that maintain a sustainable wood supply for the sector

Strategic objectives have been developed under five pillars including People, Innovation and Productivity, Business Environment and Regional Cooperation, Access to Capital and Infrastructure, and Market Access. The strategic objectives flow directly from the SWOT analysis above. Each is followed by initial work plan items which have been identified as a means of contributing to fulfillment of the strategic objective.

## 1. People

The 2010 New Brunswick Forestry Summit, which was convened to look at critical issues facing the industry and to identify the fundamentals for future success, identified “support for training and development for a stronger skilled and qualified work force” as being one of the key issues needing to be addressed.

This sector, like many others, faces labour shortages directly related to the aging of the workforce. One pulp and paper facility, for instance, has indicated that more than 50 per cent of its employees are at or near retirement age. This aging workforce combined with shrinking enrolments in forestry-

related training programs across the country, does not bode well for the province's ability to maintain its highly skilled workforce in this industry.

The lack of succession planning within New Brunswick companies puts employees in a position of vulnerability. Management/owners of value-added wood companies are aging at the same rate as their employees and many do not have a plan in place for the operation to continue upon their retirement. The competitiveness of the industry requires a strong vision and the ability to implement necessary changes. The sustainability and growth of the industry will require managers with the competencies to adapt to change, identify investments, manage resources, and access capital.

Finally, the economic downturn of the past few years has changed employment with jobs lost in manufacturing, harvesting and transportation. As a result of decreased harvesting, the equipment to undertake harvesting has been sold. As markets begin to rebound, the lack of both primary forestry harvesters and the availability of logging equipment will become a challenge for the sector.

### **Strategic Objectives - People**

- a) Ensure a thorough understanding of the industry's needs with respect to human resources and training for the short and long term.
  - i. Develop a human resource profile that documents what is needed and outlines the existing training capacity.
- b) Address succession needs of industry.
  - i. Work with industry to develop profiles of companies that are looking for new ownership and search for investors.

## **2. Innovation and Productivity**

Research, development and innovation are key factors in positioning companies to compete more effectively in the global marketplace, yet New Brunswick companies have lagged behind in this respect.

The 2010 Forestry Summit participants suggested that government should undertake an innovation assessment to review innovation in other jurisdictions and conduct a review of the current state of the New Brunswick industry in order to identify areas with potential for transition. The importance of innovation in transforming the forest industry has been highlighted in virtually every recent study on the future of the industry across Canada and elsewhere in the world. To address this, initiatives such as the following have been implemented:

The federal government has initiated, through the National Sciences and Engineering Research Council, eight Strategic Networks that are focused on innovation at various levels and forms throughout the entire wood industry. Of particular interest is the Strategic Network on Innovative

Wood Products and Building Systems. This work is intended to help all manufacturers of wood-based construction products become better suppliers of green building products, by improving products, processes and national building codes to encourage the use of more wood in non-residential construction. This innovation goes hand-in-hand with marketing New Brunswick green building products and systems to customers around the world.

The province is also involved in a hardwood initiative that is co-funded by New Brunswick, Nova Scotia, Quebec and Ontario and led by FPInnovations-Forintek. The project is researching innovative ways to finish hardwood specialty products, and looking at new harvesting techniques and efficiencies.

One of the most significant issues facing the value-added wood sector is the cost of electricity. For some paper mills, electricity costs can amount to over half of input costs. Based on comparisons across North America, it is evident that large industrial forestry companies operating in New Brunswick are at a significant operating-cost disadvantage relative to most competing forestry-intensive jurisdictions in Canada. Recognizing this challenge and working with companies to increase energy efficiency will be an important undertaking.

New Brunswick is well-positioned to develop and deploy leading-edge processes and technology with respect to green energy from wood and other products. A combined heat and power plant could form the basis for building a new green industrial park – or for converting an existing park. Using this technology, all tenants benefit by purchasing green energy and electricity from a biomass generating facility co-located in the park. This is one of the basic building blocks to establishing and operating a green manufacturing facility which in turn supplies the market with green products. Finally, a “Sustainable Forest-Based Community” located in a rural area, as suggested in the Roberts Report, would be a true forum in which to showcase expertise in providing green products. The Restigouche region, which is already home to many existing wood companies, would be an ideal location to pursue such a project.

In order for the industry to move forward, new technologies and products must be aligned with existing capabilities and wood supply. Innovation in the value added wood industry will benefit from leveraging the strength of various institutions including the University of New Brunswick, the Université de Moncton and the Campbellton Woodworking Centre of Excellence.

## Strategic Objectives - Innovation and Productivity

- a) Stimulate more investment in innovation, new technologies and products.
  - i. Conduct an assessment of emerging technologies and new products in the wood sector and determine the basic requirements for adoption by New Brunswick companies.
  - ii. Work with companies to match existing capabilities and opportunities identified in the innovation assessment and assist those interested to do the due diligence required to adopt them.

- iii. Adapt programs and services to provide support to companies to adopt innovative products and practices.
- iv. Implement initiatives related to energy efficiency in the sector.
- b) Promote the development of green energy projects which use wood biomass.
  - i. Conduct a feasibility study around the creation of a “Sustainable Forest-Based Community” within the province.
  - ii. Work with development partners towards the establishment of a “green” industrial park where a combined heat and power plant becomes the cornerstone of development.

### ***3. Business Environment and Regional Cooperation***

The Canada-US Softwood Lumber Agreement (SLA) continues to be fundamental for companies with respect to accessing US markets. In New Brunswick, the exclusion from export taxes and quotas for Maritime-produced lumber granted under the agreement, plus our proximity to the North Eastern US market, has enabled sawmills to be more competitive in that market. This agreement is handled provincially by the Department of Natural Resources and Intergovernmental Affairs Division of the Executive Council Office. The interests of New Brunswick are represented by these government departments and by the Maritime Lumber Bureau.

A key strength of the province’s business environment for value-added wood is the tax structure. Business taxes are among the most competitive in North America. Continued work to maintain competitive rates for non-profit-sensitive taxes, such as taxes applied to property, will be important given this highly capitalized industry.

The provincial government has recently partnered with the forest industry and the private woodlot sector to establish a wood-flow model. This model will allow stakeholders to determine the provincial wood supply and demand, the economic cost of flowing species and products to mills, and the spatial aspects of where wood can be sourced. This will significantly improve the business environment as up-to-date information will now be readily available.

Increasing the overall use of wood biomass is an important means of ensuring the competitiveness of the broader wood sector. Benefits include the development of a wood pellet and forestry supply chain with spin-offs, the replacement of imported foreign oil with domestically produced fuel, and the conversion of oil-fired boilers to more pellet systems. Currently, a cluster of pellet producers have the capacity to produce more than 260,000 tonnes of pellets per year. The producers rely heavily on a fragile export market with more than 80 per cent of product being exported, according to the Canadian Bioenergy Association. The value of the Euro, increases in shipping costs and increased availability of pellets in North America, have caused considerable strain on the ability of local producers to export. The provincial government can assist existing wood pellet producers by developing a policy environment that supports the growth of a domestic supply chain and increases the volume of pellets used locally.

Adding further strength to the business environment is the presence of a strong industry champion - the New Brunswick Forest Products Association (NBFPA). The NBFPA provides a unified voice for industry and works effectively with both levels of government as well as associations at the national level to advocate on behalf of the industry. Associations such as the NBFPA can be a key link in promoting strategic partnerships amongst companies by providing a setting for industry to discuss potential solutions to problems and identify opportunities to work together.

### **Strategic Objectives - Business Environment and Regional Cooperation**

- a) Ensure that the Maritime Exclusion under the Softwood Lumber Agreement continues beyond 2015.
  - i. Advocate for the needs of New Brunswick lumber producers.
- b) Support access to up-to-date information regarding wood availability to attract investment, support competitiveness of existing companies and promote use of provincially-grown wood in the industry.
  - i. Promote the use of the Department of Natural Resources Wood-Flow Model to search information with regards to licences and wood supply sources and needs along with product capabilities, for use in attracting investment to the industry.
- c) Increase the use of wood biomass-based fuels in the province.
  - i. Develop a policy to support the installation of biomass heating systems (both in new construction and retrofits) in residential, commercial and public sector applications.
  - ii. Work with existing industry to develop a bulk-delivery-pellet supply-chain system in New Brunswick.
- d) Facilitate the development of strategic business alliances.
  - i. Create opportunities, with industry partners for business matching.

## **4. Access to Capital and Infrastructure**

Significant rationalization in the forestry sector over the past several years has resulted in reluctance by commercial lenders to provide capital to value-added wood companies. Industry has been able to leverage provincial and federal investments to help become more energy efficient. FPIInnovations-Forintek has also helped coordinate partners and attract financial support for research, development and innovation projects. Continued investments from primary harvesting to manufacturing are required to help the industry recapitalize and improve its productivity.

The provincial government can assist industry by encouraging more lending from private sources. This will include working closely with the New Brunswick Securities Commission to market the Small Business Investor Tax Credit program as a means of raising capital for small value-added wood

producers. It may also involve meeting with private equity firms to discuss the strength of New Brunswick's value-added wood sector to build awareness of investment opportunities.

## Strategic Objectives - Access to Capital and Infrastructure

- a) Improve access to capital.
  - i. Work with the New Brunswick Securities Commission to promote the Small Business Investor Tax Credit program as a means for companies to attract investment from New Brunswick residents.

## 5. Market Access

The value-added wood sector has been particularly hard hit by the US economic downturn as a result of the 2007 sub-prime crisis and the enormous drop in US housing starts that resulted. The US market continues to be very soft, and it is not likely that new home construction will recover to its pre-recession peak. Thus, it is only through market diversification that New Brunswick companies can mitigate the risk associated with being almost entirely dependent on the US market.

Under the SLA which expires in 2015, New Brunswick and the other Atlantic provinces have access to the US market without tariffs or quotas. As the US is the primary market for our lumber (99.7 per cent of lumber exports in 2009), this unfettered access is essential to the industry. Any assistance provided by the province which appears to be in breach of the SLA could impact future negotiations.

Despite the US situation, the overall market outlook for the value-added wood industry is positive. The demand for wood is growing largely due to the enormous predicted consumption of the Chinese marketplace and the global scarcity of wood as a raw material. The completion of the Canada - Europe Trade Agreement (CETA) will also open markets as the province is situated for easier access to the market than central and western Canadian companies—better than many US companies and even better than Chinese and other Asian competitors.

Market access is a key component of this strategy with three main thrusts: increased domestic usage, diversification of global markets, and a focus on niche markets where ability to produce custom products is a strength. New Brunswick companies are small players for the most part. They do not produce the volume of wood of many other regions but they do produce high-quality primary and secondary products. They are well-positioned to become known as growers, users and exporters of high-quality, green and sustainable wood products.

Increasing domestic usage can be encouraged via a provincial policy which sets a target for the carbon footprint of public buildings. If architects and engineers are required to provide carbon calculations in terms of embodied carbon (kg/m<sup>3</sup> of finished space), the use of wood in construction will always help them to meet the set targets. Architects and engineers will quickly adapt and

become creative in employing wood in public projects. Additionally, manufacturers will respond with more innovative wood products that will help achieve carbon targets.

Carbon targets can also be impacted by utilizing wood as a source of energy. Increased emphasis on pellets as a carbon-friendly residential heating source would enhance the ability of pellet producers to market their product. In addition, commercial applications using pellets or chips can also help to reduce dependence on fossil fuels and position the province in a positive light with respect to supporting green and sustainable energy applications.

Diversifying global markets will help to reduce the dependence on the performance of the US. The wood sector will benefit from concentrating on the development of the Chinese and European markets with a focus on providing green sustainable system-built housing and green-certified products. In order to access markets, the growing green building market in particular, companies are required to obtain specific certifications for their products and/or processes. Certifications, such as Environmental Product Declarations (EPDs) which address the carbon footprint of individual products, are becoming mandatory for entry into key markets such as Europe.

The final market access thrust is to strengthen our capacity in niche markets which have not been adversely affected by the current economic crisis – specifically, the green building market and the system-built housing market. Green and sustainable buildings have gained market share over the past few years unlike the housing market, in general, which has experienced a severe decline in most jurisdictions around the world, particularly the US. The ability to supply complete housing systems is an advantage in markets such as China where speed and ease of construction is critical.

### Strategic Objectives - Market Access

- a) Generate demand for value-added wood products in New Brunswick commercial construction.
  - i. Pursue development of a Provincial “Wood in Public Buildings Policy” based on carbon footprint targets.
- b) Promote supply-chain linkages between local companies.
  - i. Work with existing companies to encourage the use of local value-added wood products to replace imports.
- c) Capitalize on emerging global growth in China and Europe.
  - i. Support missions which provide opportunities to expose New Brunswick companies to strategic markets.
- d) Strengthen capacity to supply environmentally certified wood products.
  - i. Increase awareness of requirements for environmental certifications.
  - ii. Assist companies to acquire certifications such as Environmental Product Declarations and Chain of Custody Certificates.

- e) Strengthen capacity in system-built housing.
  - i. Work to diversify production capacity in existing companies to service the system built housing market.

## Performance Measurement

Key indicators for the value-added wood sector that will be used to assess performance over the duration of the strategy include GDP, employment and productivity. Nova Scotia and the State of Maine have been identified as potential jurisdictions to be used for performance comparison purposes.

Indicator	Base (2011)	Source
GDP	\$969 million (2002\$)	Statistics Canada
Employment	10,600	Statistics Canada
Productivity	\$91,377 per worker	GDP/Employment

