IN THE GREEN PAPER ENTITLED FORESTS: BUILDING A FUTURE FOR QUÉBEC, THE QUÉBEC GOVERNMENT PROPOSED TO INTRODUCE AN INDUSTRIAL DEVELOPMENT STRATEGY FOCUSED ON HIGH VALUE-ADDED PRODUCTS, INCLUDING FOREST BIOMASS, TO HELP MAINTAIN AN INNOVATIVE INDUSTRY ABLE TO CREATE WEALTH AND LONG-TERM JOBS. THE STRATEGY WOULD ALSO AIM TO INCREASE THE USE OF WOOD AS AN ECOLOGICAL MATERIAL, AND MITIGATE GREENHOUSE GAS EMISSIONS. THE NEW FOREST REGIME NOT ONLY ALLOWS FOR THE ALLOCATION OF FOREST BIOMASS, BUT ALSO PROMOTES INVESTMENT AND THE DEVELOPMENT OF BIOMASS APPLICATION TECHNOLOGIES.

A SOURCE OF RENEWABLE ENERGY

Québec’s forests offer considerable potential for forest biomass, an abundant and renewable resource that can be used among other things to produce energy. Thanks to research and development, it can be now be processed and used advantageously in the form of bio-products. **Forest biomass includes material left on logging sites (trunks, crowns and branches), and unused inferior-quality wood from public and private forests.** The potential annual volume is estimated at 6.4 million anhydrous metric tonnes (AMT).

In February 2009, the Québec Government took a further step towards the implementation of its industrial development strategy by introducing a plan of action focused specifically on the energy sector and entitled “Developing the Value of Forest Biomass”. The aim of the plan is to replace pollutant energy forms by clean, renewable forms, thereby reducing greenhouse gas emission.
A Forest Biomass Allocation Program came into force in the public forests in June 2008. It allows the Ministère des Ressources naturelles et de la Faune (MRNF) to allocate forest biomass to promoters for a period of five years, following a competitive bidding process for volumes available regionally and in specific management units. The process includes an evaluation grid to ensure that the best biomass development projects are selected. In addition, the regional conferences of elected officers are able to influence the program and adjust it to regional requirements, for example by informing the MRNF of the relative importance of the various project classification criteria in their respective regions, launching their own calls for bids, or making recommendations concerning the proposals received. Calls for bids have already taken place in a number of regions, and others will be launched between now and March 31, 2013, since the available volumes have not yet been fully allocated.

In Québec, forest biomass recovery is still in its infancy. In Europe, however, it is common to salvage and use the resource, mainly because of high energy values and the short distances between biomass salvage sites and end users.

Soil fertility will be monitored scientifically to ensure that biomass harvesting does not compromise the integrity of the forests. Precautions must also be taken, among other things to protect fragile soils. Current harvesting methods require at least 30% of logged materials to be left on logging sites, thereby helping to fuel the forest ecosystem.
AIR QUALITY AND GREENHOUSE GAS EMISSIONS

Forest biomass and wood, when used for energy purposes, have a neutral carbon cycle over a given period, unlike fossil fuels, which are directly responsible for emitting greenhouse gases. Replacement of fossil fuels with forest biomass will therefore help to reduce long-term greenhouse gas emissions.

Modern residential, industrial and commercial heating devices are more efficient at combustion than their predecessors, and this reduces the emission of particles that are harmful to human health. These devices are equipped with gas recovery and burning systems, and have nothing in common with their predecessors, especially the older wood-burning stoves that do not comply with emission standards.

THE PELLET MARKET

According to the MRNF’s registers, there are currently eight heating pellet manufacturers in Québec, with a combined annual production capacity of roughly 345,000 anhydrous metric tonnes (AMT). In Québec, pellet consumption is approximately 70 AMT per year. The residential market for the product is stagnant, and the industrial, institutional, maple syrup and commercial markets are virtually non-existent. However, the potential is undeniable. It is up to heating device manufacturers to seize on this excellent business opportunity.

The context is conducive to the emergence of forest biomass development projects, since biomass is a renewable resource able to produce green energy to meet growing energy needs and play a significant role in reducing greenhouse gas emissions.

The main anticipated impacts of forest biomass use include the creation of new economic activity in the regions, and a better energy balance for Québec.

Replacement of fossil fuels with forest biomass will therefore help to reduce long-term greenhouse gas emissions.
Key points

- There is considerable potential for the development of forest biomass.
- Forest biomass is an emerging sector that will allow for job creation, new product development and the use of another environmental resource to generate energy value.
- In February 2009, the Government launched a plan of action entitled “Developing the Value of Forest Biomass”, which has helped to create a context conducive to these new ecological outlets.
- Among other things, the plan of action allows for regional calls for bids with selection criteria established in collaboration with regional conferences of elected officers.
- At the present time, 11 regions have launched calls for bids, and 29 allocation agreements have been signed, for a total volume of more than 1,500,000 green metric tonnes.
- In Québec, there are eight pellet manufacturers, six compressed log manufacturers and nine cogenerating plants.

For further information on forest biomass, please visit the following website:

mrnf.gouv.qc.ca/forets/entreprises/entreprises-transformation-strategie-energie.jsp