



## Fundy Model Forest E-News September 2010

### **Viability of Small Thermal and Combined Heat and Power Plants in New Brunswick**

Results of an independent analysis of small-scale thermal and combined heat and power plants for the production of energy using biomass from woodlots as a feedstock are now available on the Fundy Model Forest [website](#).

Fundy Model Forest worked with the New Brunswick Federation of Woodlot Owners and the Department of Energy to develop the project.

The study, carried out in 2009, looked at three case studies. Each case was fully assessed regarding potential boiler size, site layout, building general arrangement drawings and process diagrams. It included a component related to biomass sourcing and pricing. While each of the studies suffered from economies of scale, the report identified options to improve the viability of such projects.

Key findings included the need to seek out high capacity heat loads with non-seasonal fluctuations. Power production will only be economical in high capacity ranges, greater than the 3 MW thresholds in the current embedded generation policy. District heating suffers from the seasonal nature of heat loads and generally requires a high density of users. Conversion costs are high for existing buildings therefore effort must be put in to identifying new construction or situations with end of life appliances.

The use of biomass in individual buildings is a challenge based on economies of scale.

The study provides very valuable information identifying the obstacles to overcome to promote the conversion and use of biomass from woodlots for heat and power. A follow-up study to assess the potential long term savings in heat and energy costs for a large building is now being developed.

The three cases were conducted by Stantec Consulting and are part of the “Bio-energy Opportunities for New Brunswick Communities and Woodlot Owners” project, a combined effort of Stantec and AGFOR Inc. Stantec’s report accompanies the *Regional Biomass Profiles Report* prepared by AGFOR, which provides details on the feedstock (mill residue, harvest residue, round wood etc.) consumed in the case studies.

The report is available in English and French.

This project will continue, focusing on the potential for long term savings for using wood or wood products as a source of heat for public buildings.

**Contact:** Nairn Hay, [Nairn@fundymodelforest.net](mailto:Nairn@fundymodelforest.net) or 506-432-7563