

Locally Produced, Renewable Biomass Energy

In the 1980s, forest-based biomass was all the rage as consumers, industry and government looked for ways to reduce reliance on costly fossil fuels. For much of that decade, Prince Edward Island was seen as a leader in biofuel technology. Woodchip burners were installed in schools and hospitals and large scale district heating systems were created to heat Island communities with affordable and locally produced renewable energy.

Cheaper oil in the 1990s led to a dramatic downturn in the renewable energy sector and many of the gains of the previous decade were lost as people and businesses switched back to more traditional fuels. At the same time, demand for building lumber and studwood drove up the price of Island wood making biomass harvesting uneconomic.

But as the saying goes, nothing lasts forever, and by 2005 people were once more beginning to express interest in renewable fuels. Once again the high cost of fossil fuel was the driving factor but this time, there was also considerable interest in exploring green, renewable energy options to reduce greenhouse gas emissions. Lumber prices also collapsed due to the global recession, so the raw product cost of forest biomass fuels became much more attractive.

Despite the downturn in the biomass sector, several Island facilities continued to use woodchips throughout this period. Currently, PEI uses about 45,000 tonnes of wood chips and waste wood products annually to heat hospitals and several large heating plants. These chips provide markets for local land owners and harvesting companies and offset some millions of litres of fuel oil and other fossil fuels. In October, the province announced another five new projects that will use forest biomass to heat schools, hospitals and other public buildings. Under this agreement, businesses will own and operate the heating units and sell the heat to the province for a set price.

A joint committee of the Public Forest Council and the Environmental Advisory Committee recently recommended (www.gov.pe.ca/photos/original/BioMassHeat.pdf) that all new biomass projects should be required to harvest biomass products in a manner that encourage forest health. This means that companies will have to source their chips from public or private properties that have up-to-date forest management plans in place and harvest suitable stands in accordance with the standards in the PEI Ecosystem-based Forest management Manual www.gov.pe.ca/forestry/eco-manual Harvest operations can only chip the tree stem. All branches, roots, leaves and other coarse woody debris must be left on site to decompose and enrich the soil. Sites must be no larger than two hectares, and must include provisions for the retention of wildlife cover, protection of streams and wetlands, and the prompt renewal of the site to natural forest cover.

Over the next few years, these biomass harvest sites will be monitored to assess how they respond and to refine harvest and management options for future years.