



Opening a new world of opportunities with wood-fired bioenergy

By Jim Stirling

Recessions can offer positive opportunities if you delve behind the gloom and hardship.

A renewed openness to exploring different ways of using all available wood fibre is a recent example. Utilizing sawmill residues in-house for heat and power is now good standard operating procedure. But using those residues and/or fibre left in the bush after logging as feedstock for external bioenergy initiatives opens a new world of opportunities.

Wood as a natural, renewable material just further contributes to the attractiveness and marketability of using sawmill and harvesting fibre residuals. What the forest industry has to do now is forge the right partnerships to help deliver successful and sustainable bioenergy projects.

It looks as though Lakeland Mills Ltd., in Prince George, British Columbia, has picked a winner.

Lakeland Mills is a well-established producer of premium stud lumber and is part of the Sinclar Group of eight regional forest companies.

Lakeland has struck a partnership with the City of Prince George and its government associates to create the Downtown District Energy System. The plan is to use surplus wood fibre available through Lakeland to produce carbon-neutral green energy for use in civic and other buildings in nearby downtown Prince George. The energy produced by Lakeland's expanded wood-residue fired system will be in the form of hot water and it will be piped to participating buildings.

The estimated cost of the district energy system was \$14.14 million in 2010, according to figures released by Mayor Dan Rogers. About \$10.15 million is expected to come from various federal and provincial grants. Rogers says the balance will be funded through a low interest loan.

The mayor anticipates the project will benefit air quality through an estimated reduction in fine particulate matter of 100 tonnes per year. Greenhouse gas emissions are also predicted to decline by 1868 tonnes a year.

Air quality management is a major political issue in Prince George and a health concern to many of its residents. The bad air rap has made Prince George the brunt of bad jokes and criticisms for years, not all of it justified. The city's three pulp mills were at one time major offenders but have been forced through more stringent regulations to literally clean up their acts and have complied.

The Lakeland/City of Prince George project received environmental approval from the federal government late in 2010. Construction is underway and it's anticipated the district energy system will be up and running in the spring of 2012.

"Our mayor and city council are being particularly innovative by working with local industry to find solutions to the challenges of air quality improvement," said Greg Stewart, president of the Sinclar Group in 2010.



“This will help position Prince George as a model for district energy solutions while enabling forest industry diversification through this business relationship.”

The diversification angle that Stewart alluded to is key. It provides a new cash flow source.

It became painfully clear through this last recession that having all ones’ eggs in one product marketing basket is a potentially dangerous and costly game to play. But even through the lowest of the low times from which the industry is now emerging, Lakeland found ways to keep running and provide pay cheques for its workers. That fact helped convince the city that Lakeland was a viable partner. That plus the fact the mill complex is literally across the CN rail tracks from downtown Prince George and the buildings the energy system will be servicing.

It took many years before B.C.’s fibre-rich forest industry of the not-so-distant past began to seriously consider lodgepole pine as a commercial wood species for dimension lumber production. And now it’s taken a recession to force much of the industry to begin changing its attitude toward wood fibre surpluses and applying the brakes to its horrific waste. A tonne of what was just an expensive nuisance to be burned with impunity contains the equivalent energy of three quarters a tonne of coal.

However, the City of Prince George/Lakeland partnership symbolizes the more enlightened approach. Lakeland Mills anticipates the consumption of 15,000 tonnes of sawmill residues annually to fuel the district energy system.

While Lakeland will not be contributing directly to the \$14.14 million capital cost estimate, the forest company will assume additional responsibilities beyond provision of wood fibre. The plant and equipment—including what the mayor describes as “state-of-the-art” emission controls—will be owned by the city. But it will be Lakeland which is responsible for maintaining and operating the equipment. And that only makes sense given the past experience of Lakeland’s people. Lakeland has signed a 10 year deal with the city to operate the system, contributing some needed security to its diversification.

The Prince George District Energy System should benefit the community through the reduction in greenhouse gas emissions while serving to increase awareness of the bioenergy potential of what used to be an industrial waste product.