

New energy technology cuts emissions, operating cost

ENVIRONMENT | System at plywood mill will replace natural gas

BY SCOTT SIMPSON
VANCOUVER SUN

Tolko Industries and a green energy company on Wednesday announced a "breakthrough" deal on a new technology that could slash millions of dollars from operating costs of British Columbia forest companies.

Tolko expects to cut energy costs at its Hefley Creek plywood mill by \$1.5 million annually by installing a "gasification" energy system that replaces standard natural gas-driven equipment for conditioning logs and drying veneer.

The mill is the first in B.C. to adopt the technology, which has been developed over the past five years by Vancouver's Nexterra Energy Corp.

Nexterra's system will annually convert 25,000 tonnes of wood residue into thermal energy, cutting Tolko's natural gas consumption by a volume equivalent to the annual needs of 1,900 single family homes.

In addition to saving money, Tolko will be cutting the greenhouse gas emissions of its current gas-driven system by 12,000 tonnes and eliminating particulate emissions from its smokestack — as well as eliminating the so-called blue haze of volatile organic compounds that is emitted by one of the mill's veneer dryers.

Nexterra is majority-owned by ARC Financial, a Calgary-based financial management company which focuses on the energy sector.

The company completed a \$5.4-million private equity financing in 2004, and has also received \$3.2 million in funding commitments from the federal and provincial governments.

It is Nexterra's first commercial project.

"We have a test gasification

plant that's been operating in Kamloops for over a year now, so we are making that jump from product development into commercial application," Nexterra president and CEO Jonathan Rhone said.

Rhone said the process burns a small amount of wood, generating heat which is then used to convert the rest of the fuel into a clean burning gas commonly known as synthetic gas, or syn-gas.

"What you get is a very clean burning gas that is used to replace natural gas. Because the gas is so clean, we can meet or exceed all of the province's emission requirements without needing all of the backup cleaning technology that all of the conventional systems have."

Natural gas prices have risen about 400 per cent since the 1990s, now consuming about 15 per cent of manufacturing costs.

"It's becoming a strategic issue for these companies, so we see that as a big opportunity."

The technology could be adapted to pulp mills, he added.

"It's a big breakthrough for the industry and for Nexterra," said Brian McCloy, a forest industry consultant who manages Ethanol BC, a joint venture by the provincial government and the B.C. forest industry which helped finance Nexterra's research.

"We can now burn wood residue almost as clean as natural gas — in fact it may be slightly in favor of burning wood residue because it doesn't have any significant greenhouse gasses associated with it, unlike natural gas."

"This gasification process will burn wood residue so clean that that you don't need any stack emission control — so there's a huge capital cost saving and the environment enjoys the benefits of not having particulates being emitted," McCloy said.

He added that profit margins in the industry are getting thinner and thinner, particularly since the softwood lumber dispute began four years ago.



Jonathan Rhone, president and CEO of Nexterra Energy Corp., with Jim Baskerville, Tolko's regional manager veneer and plywood, at site of Nexterra's gasification energy pilot plant.