

ENERGY

B.C. mill to harness energy of hog fuel in industry first

TOLKO INDUSTRIES

Nexterra-built plant will cut gas costs, reduce waste and emissions

BY GORDON HAMILTON

VANCOUVER • **Tolko Industries Ltd.** turned the switch yesterday on a new energy plant that makes gas from wood waste, marking the first application in the North American forest industry of a new green technology that could save millions of dollars in gas costs.

The plant, designed and built by Vancouver-based **Nexterra Energy Corp.**, makes energy from hog fuel, a waste product composed mostly of bark that many mills burn simply for disposal. The Nexterra plant converts it into a synthetic gas called syngas, which Tolko is using to replace costly natural gas at its Heffley Creek plywood mill north of Kamloops, B.C. The plant has successfully completed its startup and Nexterra turned over the operation to Tolko yesterday.

Nexterra and Tolko are singing the praises of the new technology, saying it marks the beginning of a new era in clean, low-cost energy. The gasification

plant saves money, puts wood waste to a higher use and cuts down on greenhouse gases.

The plant will convert 13,000 tonnes of wood waste a year into gas that can replace natural gas in drying veneer and heating water used to condition logs for peeling.

Tolko regional manager Jim Baskerville said plywood production takes a lot of heat and the new plant will knock \$1.5-million off the Heffley plant's current gas bill, cutting gas costs by one-third.

"That makes a very compelling business case," Mr. Baskerville said.

He said converting hog fuel to gas increases its value to Tolko twentyfold. Tolko was selling its hog fuel for \$5 a tonne to Weyerhaeuser Co. for straight combustion burning at Weyerhaeuser's Kamloops pulp mill. But using hog fuel to create much more valuable gas has pushed its value to the company up to \$100 a tonne.

Nexterra president and CEO Jonathan Rhone said the plant will replace 235,000 gigajoules of natural gas a year. "That is roughly the equivalent of the amount of natural gas required to heat 1,900 typical B.C. homes," he said.

He also said the clean-burning gas will reduce air emissions; reducing Tolko's greenhouse gas emissions by an estimated 12,000 tonnes a year, the



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Nexterra Energy president and CEO Jonathan Rhone inspects the gasification system at Tolko Heffley Creek plywood mill near Kamloops, B.C. The plant, a first of its kind in North America, is designed to reduce emissions by 12,000 tonnes a year.

equivalent of taking 3,000 cars off the road.

The gasification plant converts biomass — plant material used as a fuel — into a complex gas consisting mainly of carbon monoxide, hydrogen and methane. It can be easily transported and, according to Jim Dangerfield, vice-president of the forest research agency Forintek, the application at Heffley Creek is just the beginning of an entirely new technology.

"We are starting by using the product for heat. But we can transport it by pipeline so we expect this will evolve in-

to a whole new array of opportunities."

With natural gas now eating about 15% of production costs in the forest industry, companies are looking for ways to bring those costs under control. That's opening the door to technologies that only a few years ago were dismissed as too exotic or too costly.

Tolko's plant is the first application of the Nexterra technology. A second project is underway in South Carolina, Mr. Rhone said. Also, Weyerhaeuser is conducting research at a pilot plant Nexterra operates at Kamloops to determine if the technology is suitable for heating

lime kilns in Weyerhaeuser's pulp mills.

Gasification plants, costing from \$5-million to \$10-million, can be paid back within 1½ to 3½ years.

Nexterra, a private company formed three years ago, bought the technology and began finding ways to apply it in the forest industry. ARC Financial, a Calgary-based energy-financing company, is the majority owner. Company executives and directors own the rest of Nexterra.

The gasification project has received federal and provincial funding as well.

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