Building a better Alberta



August 5, 2011

Bioenergy project to turn pulp waste into green electricity

Whitecourt... With support from the Alberta government, a new bioenergy project at Millar Western Forest Products Ltd. will convert organic material found in pulp mill wastewater into enough green electricity to power approximately 6,500 homes annually.

This project, receiving \$17.5 million in funding from the province, will produce enough green energy to allow the company to draw 6.2 fewer megawatts from the grid to operate its mill. Once proven at the Whitecourt pulp mill, the technology used in this project has the potential to make significant environmental improvements in pulp and paper mills across the country.

"Turning wood waste into renewable energy is an excellent example of how we can efficiently use our natural resources," said Environment Minister Rob Renner. "By promoting innovation, we are continually raising the bar for environmental performance in Alberta."

Located at Millar Western's Whitecourt pulp mill, the proposed Bioenergy Effluent Project will involve the installation of an anaerobic hybrid digester (AHD) to pre-treat wastewater and produce a biogas that will generate green electricity.

"In addition to reducing our environmental footprint here at home, advanced technologies like AHD can give us a marketing advantage, setting Alberta's forest products industry apart as innovative and green," said Ron Reis, Millar Western's Senior Vice-President of Pulp.

The AHD technology will also lower the mill's direct and indirect greenhouse gas emissions by about 50,000 tonnes per year, reduce water consumption, improve the quality of treated wastewater discharges, and cut the production of solid organic waste in half.

"This project will not only generate important economic activity during construction but will also make more complete use of our forest resources," said George VanderBurg, MLA for Whitecourt-Ste. Anne. "By promoting the adoption of new technologies, we have the potential to make our forest industry stronger and more competitive."

Provincial funding for the project comes from Alberta's share of the Canada ecoTrust for Clean Air and Climate Change. The ecoTrust distributed \$1.5 billion among all the provinces and territories to assist with clean air and climate change initiatives. Alberta's share is \$155.9 million.

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Backgrounder

Mhorta

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Millar Western's Bioenergy Effluent Project

The Bioenergy Effluent Project will be located at Millar Western's pulp mill in Whitecourt, Alberta. The project proposes to demonstrate technology that will be used to convert organic materials in pulp mill waste water into a biogas. The biogas will fuel reciprocating engines to generate green electricity, which will reduce the mill's purchased power consumption. Waste heat captured from the process will be used to lower the mill's natural gas requirements. The proposed project will involve the use of an anaerobic hybrid digester, or AHD, to pre-treat pulp mill waste water before it enters the mill's existing aerobic treatment system. Though widely used in other industries, AHD technology is new to the pulp and paper sector.

The Bioenergy Effluent Project is expected to deliver significant environmental benefits, including lower greenhouse gas emissions, reduced water consumption, improvements in the quality of treated effluent discharges to receiving waters, and cuts in the production of solid organic waste. The project is now in the process of pursuing the necessary permits and, if approved, will take two years to complete.

ecoTrust Program

With this funding for Millar Western Forest Products, almost \$100 million has been invested from Alberta's share of the Canada ecoTrust for Clean Air and Climate Change into clean energy research and waste-to-energy projects. Other initiatives being funded are:

- \$3 million to the City of Medicine Hat to help establish the Solar Thermal Energy Demonstration Project, a pilot project that will demonstrate the potential of using solar energy to produce the steam needed to generate electricity, instead of using fossil fuels. (November 2010)
- \$1 million to Enbridge Inc. and its partners for the CO₂ Slurry Pipeline Research Project. (March 2010)
- \$25 million to Carbon Management Canada, a national, university-led research network, to develop technology and insights to reduce carbon emissions in Canada's fossil fuel energy sector. (December 2009)
- \$25 million to an international partnership between the University of Alberta and the Helmholtz Association of German Research Centres to drive innovation towards cleaner energy production, with particular focus on the oil sands. (December 2009)
- \$20 million to the Otoka Energy Corporation to develop a forestry waste-to-energy production facility in the Town of Drayton Valley. (October 2009)
- \$7.45 million to the City of Edmonton for a renewable energy project that will transfer residual energy from a biofuels facility to heat a neighborhood in Strathcona County. (October 2009)

The balance of Alberta's ecoTrust funds will be used to support other clean air and climate change initiatives in the province. - 30 -

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