October 31, 2017

Report on the Biomass 2017 Conference and RRFDC Wood Related Activities

OPPORTUNITIES:

Cellulosic Ethanol:

I discussed the region's wood residues and potential for additional unused wood resources with Patrick Pitkanen of st1, an advanced fuels company. The company has a pilot cellulosic ethanol plant in Finland that uses sawdust as a feedstock, up and running in Finland and are looking for an area to sell or set up the technology. They are looking for enough feedstock to make at least 1.4 million liters of ethanol per year.

I believe that we do have the feedstock here if we can utilize the wood residues and standing fibre on the Crossroute that is not currently being harvested. A plant would cost an estimated $50 million dollars but he said that st1 and others could participate financially in a project.

Bio-Fuel

There was a presentation on bio-fuels, primarily bio-diesel which has a growing market. I got the impression that making a consistent certifiable product was difficult unless the feedstock was consistent.

CHP (Combined Heating and Power)

There were many CHP companies at the session, at least 6. They were promoting stand alone units which would heat and power communities with wood, either chips or pellets. Chips are the primary feedstock in Finland and there are 1200 such units operating in the country. These units may have some application in Ontario, but there is some difficulty due to power purchase agreements needed to produce and use the power. The province has made it somewhat easier to use the units from an emissions standpoint through the new ESAR category.

Pellets

There was very little discussion on pellets and the Finns do not use them. They said their wood costs are too high to use the wood for such a low end product.

The Advance Pellet rfp was mentioned.

Whitesand CHP and Pellet Project.

That being said, the Whitesand First nation has the rights to the Nipigon forest, formerly Buchanan's, and a power purchase agreement with Hydro One at around $.44 per Kilowatt. They intend to generate 5 Megs of power for distribution to the FN and the Town of Armstrong, use some power to generate pellets for sale and become a wood sorting facility for Resolute FP and other. It appears to be a community based employment and green energy project as it will reduce the community reliance on diesel power generation, reduce their carbon footprint and create jobs in the region.

Lignin

There was a presentation on lignin and a pilot project between Resolute FP, FP Innovations and Lakehead University at the Resolute FP mill in Thunder Bay. Lignin has many uses especially in replacing oil based plastic. It may be why Resolute is holding onto the Crossroute Forest.

POTENTIAL OPPORTUNITY FOR THE DISTRICT - ANAEROBIC DIGESTER:

Wood ash, wood fines, abattoir offal and other biologics are a problem to many businesses, municipalities and First Nations in the Rainy River District. At a recent meeting with Elaine Graham of OMAFRA a diverse group including, the Emo Research Station, the RRFDC, Norbord, the Township of Chapple and Emo Feeds discussed the potential for applying to the 4th intake of the Investment in Forest Industry Transformation (IFIT) program (see attached) which has $55 million available for innovative community problems to reduce waste and carbon impacts.

Project:

After some discussion, it was determined that the most suitable project for the region was a biodigester situated mid-district, most likely at or near the Norbord facility; the program required a for profit forestry company to take the lead.

Other reasons are:

- Norbord has, and is seeking a long term solution to disposing of its wood ash and wood fines from the manufacturing process.
- The wood ash is currently being stored at the Township of Chapple municipal dump and it taking up space which reduces the life of the dump.
- The Rainy River Regional Abattoir Inc. which is located in Emo, is seeking ways to dispose of the offal, blood and SRMs which occur after slaughter.

- Other biological materials such as leaves, restaurant waste, etc can also be disposed of in the digester from the surrounding area.

The material, which leaves the digester following the indigestion process, is sterile compost for which there is a market in the horticultural sector.

Unfortunately the program was announced in mid-September and closes next week on October 12th. This is far too short a time frame to put together a successful Expression of Interest due to such issues as who would participate, at what scale the project would be etc.

The group thought that we should investigate the project further and see if there are other interested parties. If there is enough interest and enough financial commitment, we should apply to the NOHFC for funds to assist use in undertaking a feasibility study and business plan if the project looks feasible. This is a proven technology but the community and business partnerships will be the innovative driver for the project.

This process would make the region ready for the next funding program either Federal or Provincial.

AN OVERVIEW OF THE RRFDC AND WOOD PRODUCTS:

Over the past few years the RRFDC has undertaken and reviewed various wood products related projects.

Wood/Grass Pellets

Outlook Market Research and Consulting and Kelwin Management Consulting recently completed Phase One (a preliminary feasibility study) for an Agricultural/Wood Fibre Pellet Facility. This Phase One work focused on several key factors that held the potential to have the greatest impact on the feasibility of the project and about which there was significant uncertainty. They included preliminary investigations of markets, feedstock availability, evaluation of the plant size and the Manitou Forest Products location for a grass and/or wood pellet/cube biomass plant.

Wood Residues

Over the last decade, pulp mills and a few large sawmills have closed in Northwestern Ontario. These same mills once took many types of residuals from other smaller saw mills and wood processing facilities within the industry. Now that there are fewer places to send residuals and the distances to the remaining facilities, make a poor business case for moving the material. In some cases, it may lead to the demise of some of these smaller facilities as well, if this market shrinks further.

Many in the industry have been warning for several years that a different solution needs to be found for mill residuals. Recently, the Rainy River Future Development Corporation (RRFDC) met with FP Innovations Industry Advisor, Percy Champagne and some local industry owners who have requested an investigation to determine the current situation in order to develop possible solutions. In the spring of 2017, the RRFDC undertook a survey of Northwestern Ontario wood manufacturing facility to determine the amount of wood residues in the region west of Atikokan.

Glulam/Wood Residues

In June 2017, the RRFDC supported a Wooden Bridge Seminar in Kenora to bring together interested parties to discuss this opportunity. Quebec has been using glulam beans for bridge construction for many years and it is easy and cost effective. Given the number of bridges in the district that need upgrading there may be opportunity here.

LEAF EWP is developing a new facility to manufacture unique glue laminated lumber products that offer innovative approaches to CLT and glulam. The project includes the design, engineering, acquisition and installation of custom equipment required to operate a unique glue laminated timber production facility and the testing and certification to allow use of products in residential and non-residential construction in Canada and the United States. The product, which LEAF has named MultiLam, will use MSR spruce for the compression and tension layers and under-utilized hardwoods (i.e. poplar) for the neutral layers of the panels and beams. This project was originally to be located in the Thunder Bay area. In the spring of 2017, the RRFDC meet with the proponent of this project in Thunder Bay to discuss the possibility of using wood from the District to make the beams.

Housing/Wall Panels

The RRFDC has investigated both local house construction and the development of a housing wall plant. Both projects faced considerable start up obstacles such as meeting Ontario manufacturing regulations, capital costs and variable markets.