

Season's Greetings!

On behalf of the CPBIS management team and the entire body of CPBIS faculty, staff and students, I extend best wishes for this holiday season to all of our newsletter readers. We value your continued interest in the Center's work as we strive to help meet the industry's research, education, and outreach needs. During this joyous season, we hope that your travels are safe and your holidays relaxing.

With warm regards,

Pat McCarthy, Director

PIRA Report Neatly Summarizes Gasification Issues

In a report written for and published by Pira, Michael Farmer and Scott Sinquefield provide an insightful summary of the current state of black liquor gasification (BLG) technology and the obstacles to its wide adoption. (Farmer and Sinquefield have also conducted research for CPBIS as principal investigators of the project, "External Benefits of Black Liquor Gasification," a byproduct of which was the creation of the CPBIS "Mills Online" database.)

The report, "Black Liquor Gasification: Paths and Obstacles to Commercialization" deals with new

technology for processing black liquor, a byproduct of kraft pulp production that is presently used to generate energy by burning it in the mill's chemical recovery boiler. BLG is one way to more efficiently convert black liquor into energy while at the same time realizing environmental benefits. The authors estimate that BLG could increase pulp mills' contribution to U.S. industrial energy demand from 3% to as much as 7%. However, incorporating it into an existing mill requires that it be made to work well without disrupting pulp production. The authors discuss obstacles to commercialization that derive from this fact and the degree to which different emerging BLG technologies are affected by them.

The report further examines the several possible pathways to commercialization, ranging from simple boiler replacement to "an even more ambitious vision: the installation of a full-scale biorefinery where pulp mills generate multiple value streams - not only electricity, but motor fuels, specialty chemical products and rare polymers extracted before or during the pulping process. Critically, a successful and mature BLG technology underpins many of these expansive biorefinery models, especially those that use BLG syngas as an intermediate product to produce motor fuels, hydrogen for peroxide bleaching or for fuel cells, mixed alcohols or special high-yield liquors. These are powerful economic motivations despite technical frustrations."

The full text of the report can be downloaded at:

<http://www.pira-international.com/BusinessIntelligence/Paper.aspx>

IP Campaign Links Paper Use to Forest Growth

MEMPHIS, Tennessee, December 1, 2010 (press release) – An awareness campaign entitled Go Paper. Grow Trees™ gives consumers the facts on how using paper products makes a direct contribution to

the health and growth of trees and the forests. According to the Food and Agricultural Organization of the United Nations (FAO), a majority of the 750 million acres of U.S. forests are privately owned. These private owners - - mostly family tree farmers -- will ultimately determine what happens to our forestlands. We depend on forests for many social, ecological and economic benefits.

Sponsored by International Paper, Go Paper. Grow Trees. was created to connect readers to the challenges private landowners face in growing and maintaining healthy forests. For more information on the awareness campaign visit

GoPaperGrowTrees.com

The interactive website provides numerous forestry facts and dispels many myths, along with offering other exciting multi-media tools, including a Go Paper. Grow Trees.™ video.

"It's important to understand that tree farmers and other private landowners plant about 4 million trees every day, which is about three to four times more than they harvest," said Teri Shanahan, IP's vice president, Commercial Printing. "By planting trees and managing forests responsibly, landowners are given the financial incentive they need to maintain and protect the valuable forest resources that provide benefits for present and future generations."

Without the income from tree farming, landowners face economic pressure to pay property taxes and replace lost revenue. A common outcome is converting forestlands to other uses such as agricultural crops that have shorter growing and cash cycles than forest products. Another tempting prospect is to sell the land for development. In either case, the forest is removed forever and so are the benefits of cleaner water, better air, wildlife habitat and biodiversity. Healthy forests are life-support systems -- and demand for paper products ensures landowners continue to farm trees.

"By providing a clearer understanding of who owns the forests and the challenges these landowners face, Go Paper. Grow Trees. is intended to correct misinformation and provide a realistic perspective on the role that paper products play in keeping our forests healthy and growing," added Shanahan. "Consumers continue to be environmentally conscious in the choices they make, so it's important they base their decisions on facts. The facts are paper products are a sustainable, renewable, recyclable and biodegradable resource -- and using paper products can actually lead to a healthier

forest ecosystem and the demand for and growth of more trees."

Recent Forestweb Headlines

Forestweb publishes a weekly news report tracking recent developments in and around the paper and forest products industries. Subscription information is at <http://www.forestweb.com/Corporate/index.cfm>

Below is a small sampling of headlines from recent issues, together with brief synopses.

December 13

AbitibiBowater emerges from creditor protection; through restructuring, company has been transformed into 'one of the lowest cost forest products companies in North America,' says CEO

The company has streamlined its asset profile, balanced its product portfolio and made other changes to dramatically lower its breakeven point.

Eldorado Brasil buys 2.5B Brazilian reais in equipment for 1.5 million tonnes/year eucalyptus pulp and paper mill in Três Lagoas, Mato Grosso, Brazil

The contract is with the Brazil subsidiary of the Graz, Austria-based Andritz AG and Helsinki-based Metso Corp.

December 6

Dissolving pulp producer Aditya Birla of India looking at Domtar's idled pulp mill in Prince Albert, Saskatchewan

Indian multi-national is looking at the dormant kraft mill for possible production of dissolving pulp; a deal would presumably satisfy Domtar that the mill would not compete in the NBSK market.

Rising prices for U.S. wastepaper present pressure to some but opportunity to others as analysts weigh outcome of increasing global demand, especially for OCC

An increase of US\$20 to \$25 per ton in old corrugated containers (OCC) prices is expected in the fourth quarter. The long-term outlook for recovered paper costs is for further increases as China continues to boost its paper and paperboard production capacity, pressuring domestic fiber prices.

November 29

South Carolina Tissue plans US\$140M tissue mill in Barnwell, South Carolina, to open in Q2 2012

The company produces 1-ton parent rolls from post-consumer fiber and sells the parent rolls to converters to produce tissue, towels and napkins.

AbitibiBowater looks to green energy sales in a post-bankruptcy future, plans to expand away from newsprint to coated and specialty papers, international markets

CEO David Paterson says the company's future lies in green energy production, coated and specialty papers, and sales to the growing markets of Brazil, Turkey and China.

New ForestEthics report accuses SFI of 'greenwashing' to market wood, paper products; claims that none of 543 SFI company audits since 2004 acknowledged any major problem on key sustainable forestry issues

Report alleges that supposed eco-label Sustainable Forestry Initiative primarily serves the interests of the timber, paper, and forest products industries.

November 22

Domtar starts up new 440,000 tons/year fluff pulp machine at its Plymouth, North Carolina, mill following conversion project

The mill will exclusively produce fluff pulp; it will operate two fiber lines and one fluff pulp machine.

Growing state approvals to drop phone books hurting U.S. paper industry; Verizon plans to seek regulatory

approval to quit distributing residential white pages in all 12 states where it operates landline phone service

People are dropping landline telephones in favor of mobile phones and using websites to look up phone numbers, phone companies argue. Savings could reach 17,000 tons/year or more of paper throughout Verizon's service areas.

Statistics Corner: Pulp Production Fails to Recover Fully

In September of 2009, it appeared that pulp producers were "emerging from the gloom" as production exhibited what seemed to be a robust recovery from the depths of the recession. Since then, however, it has become apparent that a complete recovery will take longer than was hoped. Figure 1 shows that production has more or less stabilized at a level that is 4% less than pre-recession levels. ■

