

Supply agreements in a "green" economy

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Pulp and paper manufacturers in North America this year breathed a sigh of relief as colleagues in other sectors of the forest products industry took major hits from the downward spiraling housing crisis. Demand for paper has remained relatively steady, while the rest of the forest products industry has entered what can only be described as one long, dark night.

In the current economic climate, tighter profit margins, due to increased delivered wood costs, doesn't seem like such a bad deal. Lurking beyond the housing crisis, however, is a varicolored challenge that threatens to

The pulp and paper industry should examine existing wood supply agreements to prepare for higher energy costs and a rising wood-based bioproducts industry

alter the economics of wood procurement costs: rising energy prices and the emergence of a robust forest-based bioenergy and biofuels industry. Pulp and paper manufacturers could soon see delivered costs for raw materials increase due to higher freight costs and competition with an industry that can afford to pay significantly more for the same material.

After dodging the worst effects of the recent housing meltdown, pulp and paper manufacturers should prepare for this next challenge now by strengthening current supply agreements to secure wood fiber supplies that are close to home.

SUPPLY SIDE VOLATILITY

Volatile chip prices, transportation costs and competition from foreign manufacturers are part and parcel of the U.S. pulp and paper industry. In the past, industry leaders offset supply-side risks by securing wood fiber through some long-term contracts and relying on the bidding process to purchase additional wood fiber when times were good.

During downturns in lumber production, when residual chip supplies were restricted, pulp and paper producers simply purchased greater amounts of round wood chips to meet production demands. This pattern is evident now throughout the U.S. South, where pine and hardwood residual chip supplies have been on a downward trend since third-quarter 2006 and more expensive round wood chip consumption has increased dramatically.¹

Steady demand for pulp and paper products has allowed manufacturers to



absorb increased furnish costs, but the wait for residual wood fiber supplies and prices to return to normal will be far longer during this downturn and, due to the emerging bioenergy and bio-fuels industry, may never come.

Supply-side volatility has always been a “normal” element of the pulp and paper business cycle, yet the current reduction in residual chip supply and spike in delivered chip costs is far from normal. This is due primarily to the widespread housing crisis, which is facing a protracted downturn and the prospects of an even longer recovery.

Unsold new home inventory rose to 9.9 months in January, the highest value since the early 1980s, and existing home inventory rose to 10.3 months. Residual chip supplies remained depressed during 2007, and recent sawmill curtailments and shutdowns during the first quarter of 2008 will further strain supplies. Forest2Market® projects that lumber production should begin to turn around in late 2008 or early 2009, when the current surplus of unsold new and existing homes is absorbed.²

A revitalized lumber industry, however, may do little to increase the availability of residual chips. At the same time the lumber industry is expected to turn around, pulp and paper manufacturers will face increased competition for round wood chips and residual wood chips from the emerging bioenergy and biomass heat industry.

GOING GREEN

In the U.S., high energy costs have resulted in a number of heat and energy projects. Of particular note for its potential to generate greater demand for wood-based heating systems, the Fuels for Schools and Beyond Darby Public Schools pilot project converted to wood biomass heat and was able to reduce heating costs by 78% (from an historic average of US\$115,000 to US\$24,805) in the 2005-2006 school year.³ At the time, heating oil cost an average of US\$2.30 per gallon. Heating

oil costs have since increased with the rise of crude oil prices. Additionally, the University of South Carolina expects to save an average of US\$2 million annually for heat and energy with the use of its US\$19 million biomass plant.⁴

Increased European demand for wood pellets, in response to greenhouse gas reduction mandates, has spurred the construction of several wood pellet plants throughout the United States.

In the U.S. South, two plants slated to come online this spring will almost double the current annual production of 1.1 million tons.⁵ Dixie Pellets, LLC, a subsidiary of New Gas Concepts, Inc. in Selma, AL, and Green Circle Bio Energy, Inc., in Cottondale, FL, will add 500,000 tons and 550,000 tons respectively of wood pellets each year at maximum capacity. These plants, in addition to other plants proposed for construction throughout the U.S., are likely to affect round wood chip supplies rather than residual chips, due to the tremendous scale of the new and proposed plants.

Industrial scale cellulosic ethanol production will also strain wood chip supplies as the industry ramps up development and production to meet the first production target for cellulosic ethanol outlined in the 2007 Energy Independence and Security Act (EISA 2007) signed into law by President Bush. EISA 2007 mandates production of 100 million gallons of cellulosic ethanol in 2010, with a final target of 16 billion gallons of cellulosic ethanol by 2022.

The net effect of the emerging bioenergy and biofuel industry will be increased competition for wood chips that will likely offset any economic gains from the recovering lumber industry.

THE FUTURE

Delivered costs for raw materials across the U.S. South have been negatively impacted by rising transportation costs, which will continue to plague the pulp and paper industry. Oil prices have almost doubled in the last year, from US\$59.26 per barrel in February 2007

to US\$95.35 per barrel during February 2008. The causes for increased oil prices are manifold, ranging from continuing instability in oil producing states, the devalued U.S. dollar, increasing demand from countries such as China and India, and a refusal on the part of OPEC to increase oil output.² Pulp and paper manufacturers in the U.S. South paid more during 2007 to transport roughly the same total volume of raw materials. Diesel costs have pushed up freight rates, adjusted for fuel surcharges, across the U.S. South substantially from fourth-quarter 2006 to fourth-quarter 2007. The average freight rate throughout the South has increased by 5.8% for pine pulpwood, 4.3% roundwood chips and 7.3% for sawmill residual chips.⁶

Although supply agreements cannot guarantee a set price or even a range, they can reduce price inflation due to competing bids from the bioenergy and biofuel industries, as well as place limits on the distance pulp and paper manufacturers must transport wood fiber. The current focus on reduced residual chips due to the housing industry truly is well-earned, but pulp and paper manufacturers cannot afford to ignore the first rumblings of the burgeoning “green economy.” 

¹ Forest2Market data

² Forest2Market Economic Outlook, March 2008

³ 2005-2006 Annual Report: Darby Fuels for Schools Report, www.fuelsforschools.info/pdf/Darby_FFS_Annual_Rpt_2005-2006.pdf

⁴ www.dcnonl.com/article/id26105

⁵ Pellet Fuels Institute, www.pelletheat.org/3/industry/index.html

⁶ Forest2Market data

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