Low-Grade Wood Markets: The New England Perspective

New England Regional Council on Forest Engineering
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Innovative Natural Resource Solutions LLC

• Founded in 1994
• Offices in New Hampshire and Maine
• Focus at the intersection of forest industry, energy and economic development
• Services include:
  - consulting in renewable energy
  - advocacy
  - forest management and protection
  - forest certification and sustainability
• Clients from the private, non-profit and government sectors
• Conducted work in all regions of North America
• www.inrsllc.com
Volume and Value from a Timber Harvest
Maine, Statewide, 2014

- Biomass: 23% Volume, 5% Value
- Pulpwood: 51% Volume, 31% Value
- Sawlogs: 26% Volume, 64% Value
Pulp and Paper
Since 1999, the Northern Forest region has lost 11 pulp mills

New York
- Deferiet
- Lyons Falls

New Hampshire
- Groveton
- Berlin

Maine
- Westbrook
- Bucksport
- Old Town
- Lincoln
- Millinocket
- East Millinocket
- Madison (May 2016)
Estimated Pulpwood Consumption by Maine Pulp Mills

Estimates Based Upon INRS Data
Maine Pulpwood Consumption by Mill
Green Tons

Madison
East Millinocket
Lincoln
Bucksport
Millinocket
Old Town
Jay
Woodland
Rumford
Somerset
Coated Paper Market
Key Items from Verso bankruptcy filing – Verso emerged from bankruptcy July 2016

• Traditional markets face decline
• “The coated paper industry faces long-term, structural decline”
• Driven by a move to digital in key markets (magazines, catalogues)
• A strong dollar has increased imports
If you like Pulp & Paper in print...

you’ll love PPI online!
Trade-Weighted U.S. Dollar Index and Maine Paper Mill Struggles
2014 - 2017, 1997 = 100
Data Source: Federal Reserve Economic Data

[Graph showing trade-weighted U.S. dollar index with data points marked for East Millinocket, Bucksport, Jay, Lincoln, Old Town, Madison, and Jay over the years from January 2014 to January 2017.]
Pulp and Paper

• Pulp and paper mills remain region’s largest consumer of wood products, and represent significant fixed infrastructure.

• Mills produce a variety of products, including market pulp, communication papers (coated and uncoated), and tissue. Each of these markets is unique.

• The Northern American paper industry has been shrinking, both in output and capacity. Individual mills often do well, but new investment in production is extremely limited in the U.S.

• Maine will remain a paper producing state for well into the future

• I expect reduced pulpwood consumption, and reduced prices for pulpwood (a bunch of factors in this one, not just demand).

• The closures are NOT cyclical
Challenges to the Pulp & Paper Industry

• You will hear
  • High taxes
  • High energy costs
  • High wood costs
  • And so on

• There are all very real, and present real challenges to the industry
  • Mills and regions now fighting over a shrinking pie

• They aren’t the fundamental issue, which is change in the marketplace, and a capital intensive industry that is hard to change with any reasonable speed
New Investment at Woodland Pulp

• 2 new tissue machines

• ~$150 million in new investment

• Used New Markets Tax Credits

• 70 new employees

FIRST SALEABLE JUMBO ROLL
MARCH 16
SAPPI Announced Investment This Week

• $165 million rebuild of PM1 at Somerset Mill
• $25 million in new wood yard (October 2016 completion)
• Clearly investing in the future of the mill, New England’s largest market for low-grade wood
Biomass
Biomass Electricity (MWh)

“Green” Attributes (Renewable Energy Certificate)

Electricity (MWh) (Wholesale)
Average Real Time Wholesale Electricity Prices
Dollars per MWh, Futures Prices for On-Peak, as of 3.7.2017 11:30 AM
Average Monthly Wholesale Electricity Price
Trailing 12 Month Average
CT Class 1 RECs (estimated)

Source: Testimony (and verification through order) in DE 16-850 - ELECTRIC RENEWABLE PORTFOLIO STANDARDS Adjustment to Renewable Class Requirements Order Maintaining Class III RPS Requirements for 2017 and Modifying Class I Useful Thermal RPS Requirements for 2016 Order Number 25,978 17-Jan-17

Offered $17 Last week
What does it take to operate biomass in 2016?

- Assumes:
  - Electricity at current futures price for the next year ($41)
  - RECs at recent broker quote ($24)
  - Biomass fuel at $25, 1.7 green tons per MWH
  - O&M at $30 per MWh

- With these assumptions, this is not an attractive business
The Markets
The glass is half full…

• We have **markets**, and are incredibly well positioned compared to other parts of the country

• We have the **forest resource and supply infrastructure** (landowners, loggers, entire forest industry ecosystem) that would make other regions jealous

• We live in close proximity to (and are part of) the **greatest collection of consumers** in the history of the world

• It is cold in New England, we heat buildings, we need process heat

• There may **never be a better time** to be develop a project or technology that uses low-grade, particularly softwood
Projects on the Drawing Board

- Sherman Station (18 MW power, activated carbon)
- East Millinocket Biorefinery
- Maine Biomass Exports (Searsport export)
- Phyto-Charter (Eastport exports)
- Ensyn (bio-oil, no location publicly suggested)
The Northeast Silviculture Institute for Foresters is a new graduate level series of training modules covering the major forest types found in the northeast U.S.

- Five 2-day sessions in 2017 and repeated in 2018.
- Will be available online at end of 2017.

Keep up to date and register for Institute training in 2017 and 2018 at nefainfo.org or send an email to levesque@inrsllc.com
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