Tailoring a Sustainable Biomass Supply Chain for Your Facility

Ongoing Lessons and Experiences

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Mission Statement

- Meet the needs of current generations without compromising the ability of future generations to do so.
- Healthy Forests
- Healthy Families
- Healthy Communities
102 years of Success

Long Term Vision

- Quality
- Stewardship
- Employees / Contractors
- Community
- Diversity
F.H. Stoltzze Land & Lumber Co.

Manufacturing

• Multi-Species – Multi product mill
  • Dimension and boards
  • Specialty products and pattern, dry kilns.
  • Use most western conifers, DF, WL, ES, LPP, AF, GF
  • Smallest log 5” top 10’6 minimum length, no max log diameter, maximum length 41’
• Use 40+mmbf logs annually (8000 log trucks/year), Enough lumber to build roughly 4,400 homes.
• 120 employees, another 65-70 contractors.
• Put roughly $28,500,000 into our local economy annually.
WHY Invest In Co-Gen?

- 100 year old boilers ........
- Need up to 30,000lbs/hr steam for lumber dry kilns
- Need more dependable – diversified outlet for biomass generated from our manufacturing and forest management activities.
- Desire to improve air quality over the 100 yr old 159’ tall natural draft stack and open burning of logging slash.
- Need to diversify our business portfolio beyond solid wood products.
Final Proposal

• 2.5mw turbine, 40,000lb boiler located at Stoltze. 30,000bdt/yr fuel consumption.
• Meets current and potential future industrial steam load.
• Could use up to 20% forest management generated fuels if cost of fuel is affordable. (up to 6,000 bdt/yr @ 45% MC = 9,250 green tons - 300 truckloads/yr)
• Uses mill residuals as primary fuel.
Operational Realities

• All Biomass is not created equal.
• Clean is a relative term.
• Cost is no object……..to engineers.
• You can not buy Biomass on Amazon.......with next day shipping and your choice of moisture content.
• Available biomass per acre of forestland does not really mean “available” to YOU.
• There is competition for the material you need.
Building a Supply Chain

- Contractor
- Landowner
- Purchaser
Contractors

- Dependability and predictability are **GOLD** to suppliers.
- Set the correct expectations from day one.
- Build partnerships, not contracts.
- Understand unique logistical challenges of your area.
- Develop a culture where quality is as important as cost.
- Communication lines need to work both ways.
- Understand the business end of your supply chain. Track costs and trends.
- Biomass must be included in the planning process for land management activities.
  - Quality starts at the stump.
  - Efficiencies only exist if they are planned for.
Landowner Relations
Landowner Relations

• Starts well before plant opens up and you start buying fiber. Especially agencies!

• Set Expectations right out of the box. VALUE – Quality – Volume

• Be realistic about what your market will mean for in woods management. Infrastructure? Cost or Gain?

• Understand the “Is Biomass good or bad” Issue.

• Regulatory benefits of biomass utilization – smoke, slash reduction etc....
Fiber Procurement Manager
Fiber Procurement Manager

• Find a balance and act as interpreter!
• Experience in Forest Management more important than experience in Biomass.
• Know the details of both sides of the operation.
• Fully understand biomass specifications and seasonal volume needs.
• Understand existing local markets
• Understand the economics
• Listen.
Costs and availability
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• Biomass is never “free”.......ANYWHERE!
• All feasibility studies under estimate cost and over estimate availability!
• Understand existing markets and impact of competition.
• You get what you pay for.
• Effects of regulatory change – Minimum wage, Hours of service.
• Buy equipment and hire employees then you can talk about COSTS!
• Big difference between “available biomass” and “biomass available”.
Take Home’s

• Value of Dependability
• Deliver Consistent Message from day One
• Build Diversity into Supply Chain
• Quality starts at the stump
• There is NO Free Biomass