



Biomass Supply for Heating, Cooling and Electrical Generation

Presented by:

Curt Richmond

General Manager

Cousineau Forest Products

Overview

- History of Cousineau Servicing Schools & Colleges
- Logistical Challenges
- Concentration Facility Benefits
- Benefits of Cousineau services
- Future
- Conclusion

Starting Out

Ten years ago Cousineau's supplied:

- One School
- 1,200 tons annually
- Exclusively for heating

Past Supply

Due to the abundance of sawmill chips ten years ago and the relatively low demand by the schools we exclusively supplied the schools with hardwood chips from local sawmills.

Currently

- Currently we handle 10 public schools and two colleges for approximately 50,000 tons annually.
- Today at some facilities the chips are being used year round for heat, hot water, power and chillers for air conditioning.



Manufacturing the Fuel

The closures of sawmills increased:

- Manufactured quality chips became a necessity
- Suppliers began producing chips in the woods from the stem of the tree (bole chips)



Need for Concentration Facilities

Ensure supply when chips are not available:

- Equipment failure
- Mud season and inclement weather
- Take advantage of spot supply (i.e. land clearing)

Concentration Yard

Centralized concentration:

- Purchase and pile down roundwood during off season
- Produce bole chips during heating season
- Deliver to facilities on demand



Scheduling

Schools & Colleges Require Delivery Appointments:

- Space restraints
- Operating hours
- On demand

Weighing the loads

Biomass is traded on a per ton basis, schools and colleges do not have truck scales; therefore, trucks that comes directly out of the woods need to locate a public scale for billing purposes.



Unloading

Unloading the fuel at the schools:

- Schools do not have hydraulic platforms
- Self-unloading trailers are required
- Drivers must clean up any spilled chips



Quality of Chips

Material handling at the schools is designed for an uniform chip:

- Branches limbs and large shards jams equipment
- No screens to remove fines
- Moisture content

Quality of load

Loads can not be contaminated:

- No dirt
- No rocks
- No Snow
- No foreign material



Storage

Chips stored outside on the ground unprotected from the weather would not meet the schools strict moisture requirements.



Benefit of Cousineau's Services

We ensure adequate supply and service by:

- Sourcing the chips for logistics and quality
- Utilizing an average of six suppliers per school
- Arranging the trucking
- Handle all of the billing and payments

Billing & Payments

- We send one invoice per week to each school
- We receive an invoice from each supplier for every truck load delivered to the schools
- We cut multiple checks each week to the suppliers

Suppliers Preference

Suppliers prefer to sell through Cousineau:

- School accounts are time consuming
- Smaller volume
- Weekly pay



Dependability

In 10 years Cousineau Forest Products has never failed to make a timely delivery to our schools and have assisted many of our competitors schools during a supply emergency.

Future Supply Challenges

Will require multiple concentration yards do to:

- A continued decline in sawmills in New England
- Loggers retiring and few new start ups (Average age is approx. 50 years old)

Future Demand

Increased usage from:

- District heating systems
- Colleges & School campuses
- Municipalities
- Private industry wanting to save money and be apart of the green movement

Conclusion

- Keep job infrastructure intact
- Keep forestlands from being developed
- Reduce dependency from fossil fuels
- Promote sustainable forest management which helps maintain good tree growth and the reduces the chance of forest fires

