WOODY BIOMASS AND MINNESOTA’S STATEWIDE WOOD ENERGY TEAM

Put modern biomass technology to work for you!

Minnesota Statewide Wood Energy Team
Start with the Basics

- What is Biomass?
- What is a Wood Energy System?
- Why does thermal energy from biomass matter?
- What are the benefits of Wood Energy Systems?
What is Biomass?

- Traditional Sources of Biomass Include:
  - Logging Residue (non-merchantable tops and limbs, small-diameter trees and stems, dead standing trees and down logs)
  - Primary and Secondary Mill residue
  - Dedicated energy crops
  - Land clearing projects
  - Fuels Reduction Projects

- Potential Sources of Biomass Include:
  - Timber Stand Improvements (TSI) “Weeding”
  - Brushlands
  - Invasive Species and Infected Wood Removal (EAB)
    - May help to offset management costs
What is a Wood Energy System?

• The use of woody feedstocks to make thermal energy (hot or cold) including:
  • Space Heating
  • District Heating or Cooling
  • Industrial Process Heat
  • Combined Heat and Power
We’re Not Talking about your Grandpa’s Wood Stove

Wood burning technology has improved dramatically over the last 25 years making wood safer, more efficient and more convenient to use. Improvements include:

• 24 hours of unattended heating

• New firebox designs that burn wood more completely and efficiently

• Today’s EPA-certified wood stoves emit 70% less particle pollution

• 50% more efficient than wood stoves manufactured before 1990.
Why does Thermal Energy from Biomass Matter?

- Thermal energy comprises 1/3 of total US energy demand
- Thermal energy represents the most efficient use of biomass to make energy
- Tremendous potential to address large US challenges
  - Decreased dependence on imported fossil fuels
  - Provide rural economic development
Benefits of Wood Energy Systems

• Accomplish multiple goals such as:
  • Increase forest management opportunities
  • Reduce the risk of forest wildfire
  • Provide additional markets for forest products
  • Reduce greenhouse gas emissions
  • Grow MN manufacturing jobs
• Provide a source of renewable energy that allows rural communities to:
  • Develop jobs locally
  • Retain economic wealth
  • Use a local source of renewable energy at a stable price point
What’s going on in MN

- Current biomass utilization
- Sustainable harvesting practices in MN
- What is the MN SWET?
Current Biomass Utilization in MN

- Estimated Current Statewide Demand for Open-market Non-mill residue Woody Biomass = 1,040,000 Green Tons (GT)
  - Open-market Non-mill residue Woody Biomass includes: logging residue and roundwood and may include salvage sites, land clearing debris, dead trees and urban wood waste.
- Resource is not inexhaustible
Wood Energy Facilities in MN

- At least 50 Wood Energy Facilities in MN (excluding landscape/mulch industry)
- Of those facilities, at least 6 use over 150,000 gt of biomass annually
  - Virtually all available mill residue it utilized
Biomass Safeguards

- 3rd Party Certification
- MN Master Logger Program
- Biomass Harvesting Guidelines
What is the Statewide Wood Energy Team?

• 22 member team comprised of Minnesotans from state, federal and non-profit organizations focused on promoting high efficiency wood energy systems
  • $250,000 from USFS for three years to drive the installation of wood energy systems
  • Targeting facilities without access to natural gas that have a heating load of 1-5mmBTU (nursing homes, schools, community centers, etc.)
• The grant has two major components:
  • Outreach and education on the benefits of high efficiency wood energy systems
  • On-site assistance for technical evaluations
Statewide Wood Energy Team Grant

Eligibility

Eligibility Criteria

- Applicant must be a non-profit, private, tribe, public entity, trade, business, or rental property owner of a facility located in Minnesota that:
  - Demonstrated thermal energy need of 1-5 mmBTU
  - Does not have access to natural gas
  - Has the potential to use commercially-proven biomass technology with fuel sourced in part from sustainable forest resources
What can the team do for you?

• Interested applicants should schedule a free one-day site visit from the Statewide Wood Energy Team to do a preliminary evaluation of a wood energy system installation.
Need More Information?

http://www.dnr.state.mn.us/forestry/biomass/swet.html

Add your name to the list on the above website to receive regular updates!

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QUESTIONS?