

Biomass Energy: Homegrown Heat for Minnesota

CERTs 2013 Conference
February 21, 2013



Agricultural Utilization Research Institute

Focus

- Community biomass projects and activities throughout Minnesota
- Ideas for developing your own biomass projects
- Technologies and resources available



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Presenters

- Rebecca Spengler – Ely Alternative Energy Task Force
- Dan Reek – ZB Engineering
- Wendy Pederson – City of Franklin



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Minnesota Biomass

- Wood and wood residue offer the **most available** feedstocks as a renewable biomass source in the Midwest
- Agricultural crop residue and coproducts offer a tremendous **volume**



Minnesota Biomass Activities

- Clean Energy Resource Team

- Focus on community driven clean energy
- State and regional activities
- Supporting clean biomass opportunities
- Focus on energy efficiency



- Minnesota Renewable Energy Roundtable

- Innovation networks, brings together people to take action on the challenges and opportunities in the area of renewable energy
- Ensure that Minnesota is recognized as a leader in renewable energy knowledge, application and utilization
- Create an implementation platform for moving short- and long-term strategic action forward
- Next meeting



Minnesota Biomass Activities



- Heating the Midwest
 - Heating the Midwest (HTM) is a group of volunteers with an interest in growing awareness and usage of biomass thermal fuel for heat in the Midwest
 - **Mission:** “To advance biomass thermal heating in the Midwest for a more sustainable future, while improving the economic, environmental and social well-being of the region”
 - HTM Summit, Carlton, MN, April 24-26, 2013
- Many state, regional, and local biomass activities are seeking your involvement!



Minnesota Biomass Projects

- **Koda Energy, Shakopee, MN**

- Combined heat and power plant (CHP) biomass
- Utilizing steam to product heat and electricity
- Approximately 75% of biomass fuel comes from Minnesota, Western Wisconsin, Northern Iowa, and North Dakota



- **D&D Commodities (Rivard Seed), Argyle, MN**

- Densification of ag-based coproducts for feed and fuel
- Identify new markets for biomass and biomass coproducts for fuel, feed, and bedding



Minnesota Biomass Projects

- **Alternative Energy Solutions, Altura, MN**
 - Collaborative project with CERTs, Winona State, and AURI
 - On-farm biomass pellet manufacturing
 - Utilizes crop residue, grasses, processing waste, wood waste



Minnesota Biomass Projects

- Alternative Energy Solutions, Altura, MN
 - Heats 65,000 sq. ft. of greenhouse
 - Reduces energy costs by about 50%
 - Uses 500-600 tons pellets/year



Biomass Technology Focuses

- Torrefaction
- Biomass Ash Granulation
- Biomass Combustion System
- Biomass Collection and Densification



Biomass Technology Focuses

- Dewatering of Wet Biomass
 - Develop new uses for agricultural products and coproducts
 - AURI's focus on technology transfer opportunities
 - Identify technologies capable of economical and efficient drying of wet biomass materials



Minnesota **Biomass Resources**

- Producer Biomass Participation Survey
- Biomass Heating Feasibility Guide
- Biomass Pellet Plant Feasibility Study Guide
- County Biomass Assessment Template



Thank you!

Alan Doering
adoering@auri.org
507.835.8990



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