Biomass Energy: Homegrown Heat for Minnesota

CERTs 2013 Conference February 21,2013





Focus

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





Presenters

 Rebecca Spengler – Ely Alternative Energy Task Force

Dan Reek – ZB Engineering

Wendy Pederson – City of Franklin





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
 - O 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 shortand long-term strategic action forward
 - Next meeting



Minnesota Biomass Activities



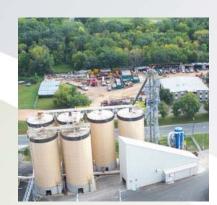


- Heating the Midwest (HTM) is a group of volunteers with an interest in growing awareness and usage of biomass thermal fuel for heat in the Midwest
- O Mission: "To advance biomass thermal heating in the Midwest for a more sustainable future, while improving the economic, environmental and social well-being of the region"
- o HTM Summit, Carlton, MN, April 24-26, 3013
- 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
 - o Heats 65,000 sq. ft. of greenhouse
 - o Reduces energy costs by about 50%
 - o 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
 - O 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





Biomass Resources

- Biomass Burner Initiative
- AURI Fuels Initiative
- Biomass Ash Initiative
- Various wood and energy crop MN DNR & U of M





Thank you!

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