

Minnesota NextGen Biomass Thermal Energy Grant Program



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Minnesota NextGen Energy Grant Program, FY14

- NextGen Energy allotment through MDA's AGRI fund, FY14
- 35 applicants with 11 projects related to biomass thermal energy
- Five projects funded (1 biomass thermal) at ~ \$1.7 million and remainder of available funds dedicated to a follow-up biomass thermal energy RFP
- Biomass Thermal RFP requirements:
 - Max award \$150,000 for \$300+ project
 - Project off natural gas line
 - Project outside metro "statistical" area (11 counties)
 - 20/100 evaluation points about emissions profile of project



Koda Energy, Shakopee – biomass staging site funded through NextGen 2011 grant

Minnesota NextGen Biomass Thermal Energy Grant Program



Viking Company feed auger, Albany

- Five applicants with 4 projects awarded funds
- ~\$385K awarded for the 4 projects; 3 of the projects actual boiler/furnace installations at \$335K
- Another \$138K allotted to Minnesota State University at Mankato for an emissions testing program
- Total awards for grant round of \$522,135.

Goals of Biomass Thermal Grant Program (late 2014)

- Displace fossil fuel use (propane specifically)
- Create example supply-chain opportunities for logging industry
- Try biomass thermal in new sectors that may experience tangential benefits (e.g., poultry barn).
- Collect fuel use and price data to compare wood with propane use.



Wood chip storage bin-Itasca Community College, Grand Rapids



Propane storage currently used by Sawyer Community Center, Sawyer



Sweat Scoop test "clumps" (that look like Peeps that look like chickens)-AURI 2011.

Whitewater Gardens Farm

- Log Boiler, 2.5 mmBtu hydronic heating system
- Sold by The Log Boiler, Hudsonville, Michigan, www.thelogboiler.com
- Plans to heat 4 greenhouses, this past winter (first year in operation) heating 1 greenhouse
- Total award: \$34,600.00



Fond du Lac Band of Lake Superior Chippewa, Sawyer

- 1.7 MMBtu wood chip boiler from Woodmaster (<http://www.woodmaster.com/>)
- Part of FDL's overall sustainability efforts
- Delays have brought construction to this spring, so no data regarding fuel usage to date.
- Total award: \$150,000.



Sawyer Community Center, Sawyer

Viking Company, Albany



Viking Company, Albany-a Gold N Plump Fryer chicken facility

- EvenTemp 1.65 MMBtu Forced Air furnace (through Becker Fireplace
<http://www.beckerfireplacecenter.com/>)
- Installed and running before the 2015-16 winter, so two years heating data
- Biomass project running side-by-side with identical chicken fryer barn
- Initial issues with obtaining insurance for poultry industry
- Total award: \$149,535.

Minnesota State University-Mankato Emissions Measurement Program

- Mankato State had previously housed IRETI* which had equipment to measure pellet stove emissions
- Equipment from IRETI plus new equipment and graduate seminar used to train students
- Measurements to be made in the field for the three biomass thermal projects in the grant program.

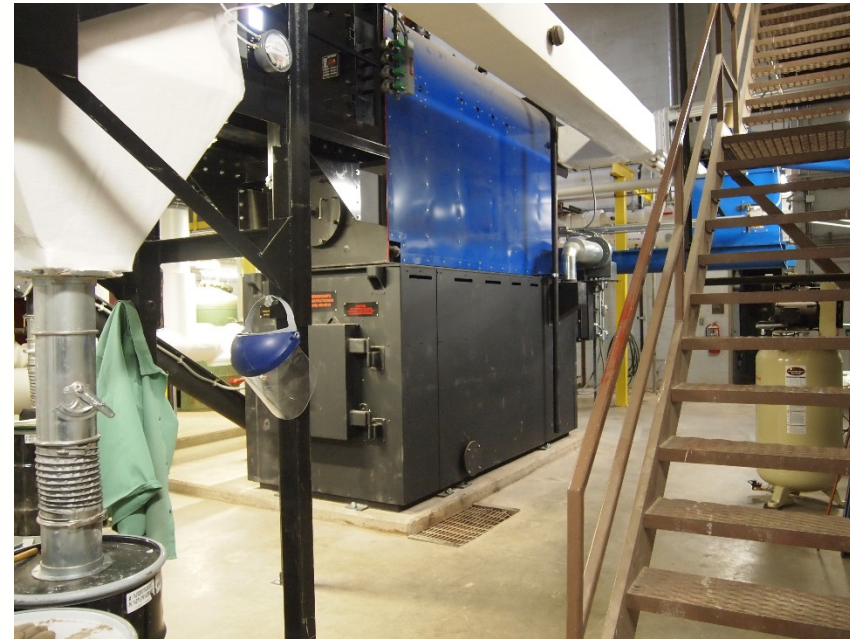


Equipment old and new, development of testing methods at Mankato State University, Mankato

* IRETI=International Renewable Energy and Technology Institute

Minnesota Bioincentive Program – Biomass Thermal Energy payments

- Part of state program to incentivize new biofuel/renewable chemical/biomass thermal energy production
- \$5 per MMBtu production biomass thermal production
- Minimum 250 MMBtu production per quarter to make a claim
- Must be able to measure and document production.
- Participation in program last 10 years from first reimbursement
- Sawyer Community Center project expected to be able to make claims to program.



Itasca Community College, Grand Rapids

Thank you/questions?



Orville L. Freeman Building, Switchgrass field

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