



ENERGY SYSTEM SURVEY of U.P. Schools

BIOMASS UTILIZATION and RESTORATION NETWORK for the UP (BURN-UP)

Introduction – This survey will be used by the BURN-UP project to help identify U.P. schools that could realize substantial financial benefits by converting to wood heat. Some of the U.P. schools that are currently saving greatly by heating with wood are profiled in the enclosed fact sheet. Based on the results of this survey, the BURN-UP Project will provide engineering assistance to a few U.P. schools that are promising candidates for conversion to wood heat. Even if you know that wood energy does not make sense for your facility at this time, please complete at least Section 1 and return the survey. If you have multiple separate heating systems, please make a copy of the survey for each system. If you need more space, feel free to add pages.

Many thanks you for your cooperation!

Section 1- Contact Information

1A – School or Facility Name: _____

1B – Person completing this survey: _____ Date: _____

1C - Person who runs the energy systems: _____

1D - Committee that oversees the energy systems: _____

1E – Preferred contact person:

Name: _____ Title: _____

Phone(s): _____

Email Address: _____

Mailing Address: _____

1F – Does this facility currently use any wood for fuel? Yes (go to 2A) No

1E –If wood fuel is not used now, was it ever considered? Yes Year: _____ No

1F – If wood fuel is not used now but was considered, why was it rejected?

Section 2 – Wood Fuel: Current Use, Interest Level

- 2A – If wood fuel is used now, what year was the system put into service? _____
- 2B – If wood fuel is used now, what advantages does it have?
- 2D – If wood fuel is used now, what disadvantages does it have?
- 2G - Does the enclosed fact sheet, "Heating U.P. Schools with Woody Biomass," stimulate greater interest in (re)considering wood-fueled systems?
- 2H - Do you have unanswered questions about wood-fired systems? Please list here or attach.
- 2J - Would someone from your school be likely to attend a tour of a successful wood-fired heating system in a U.P. school? Yes No
- 2I - How would you rate your current level of interest in wood energy?
 None Low Moderate High Actively pursuing
- 2K - Would your school like to be considered for a no/low-cost engineering assessment of your energy system? Yes No

Section 3 – School/Facility Information

- 3A – Type of school/facility:
Elementary
Middle school
High school
Other: _____
- 3B – Number of students/occupants: _____
- 3C – Number of floors: _____. 2D – Number of buildings: _____
- 3E – Year of construction: _____. 2F – Square feet heated: _____
- 3G – If there are any plans for renovation or construction of the heating system, please explain:

Section 4 – Heating System Information

- 4A – Heating system size - Total square feet heated: _____
- 4B – Configuration (check one or more):
Heating plant in one location
Different heating plants in different locations. How many: _____
Individual, room-by-room heating systems
Boiler room accessible to vehicles
- 4C – How is heat delivered to rooms?

Hot water
 Steam
 Ducted air
 Electric heat

4D – How is space heat generated? List capacity (btu or KW) after checked item(s).

System Type	btu or KW	Year (re)built
Hot water boiler		
Warm air furnace (in mechanical room)		
Gas duct heaters or roof-top systems		
Steam boiler		
Electric boiler		
Electric baseboard		
Electric duct coils		
Electric furnace		
Heat pumps		
Other:		

4E – What fuels are used? (check all that apply):

Natural gas
 LP gas (propane)
 No. 2 fuel oil/diesel
 Wood – what form(s)?: _____

4F – Please describe how the fuels used are stored (number, capacity, location of tanks):

4G – If any of the checked fuels are used for purposes other than space heat, please explain:

Section 5 – Domestic Hot Water (DHW)

5A – Uses of domestic hot water (check all that apply):

Lavatories
 Kitchen (for regular hot lunch program)
 Gym showers: Heavily used? _____
 Other large uses: _____

5B – Type of system (check all that apply):

Single tank-type heater
 Multiple tank-type heaters
 Off heating boiler with separate storage tank
 Hot water generator with separate storage tank
 Other: _____

5E – What fuels are used (check all that apply):

Natural gas
 Electricity
 LP gas (propane)
 No. 2 fuel oil/diesel
 Wood – what form(s)?: _____

5F – Please describe location(s) or heater(s), including areas/used served:

5G - Please describe how the fuels used are stored (number, capacity, location of tanks):

Section 6 – Building Envelope

6A – Window type: _____ Single pane: _____ Double pane: _____

6B – Wall type: _____ Insulation value: _____

6C – Roof type: _____ Insulation value: _____

Section 7 – Other Information

If you are seriously interested in wood energy and being considered for a low/no-cost engineering assessment, please provide:

7A – Fuel records: Enclose a 3-year account history for each fuel delivered to the school, including delivery date, gallons (fuel oil or propane) or dekatherms (natural gas or propane) and invoiced cost.

7B – Electricity Usage: If electric heat is a major heat source, supply monthly electric billing records, including kilowatt hour usage, cost, and (if applicable) monthly peak demand in KW.

7C – Please provide any other information that may help understand your space heating and DHW systems (use back or attach):

Section 8 – Miscellaneous

8A - Do you have neighboring facilities that might share an energy system? Yes No

8B - Do you have a school forest or own forest land? Yes No How many acres?

8C - Are you aware of the Michigan Green Schools program? Yes No

Please return by 15 January 2008 to:

BURN-UP Project, UP RC&D
780 Commerce Dr., Suite C
Marquette, MI 49855

906-226-2461 X122
burn-up@charterinternet.com
www.upwoodybiomass.org

