

## What is woody biomass?

Woody biomass is a general term that includes all types of wood. In relation to fuelwood, it usually refers to low value forms of wood such as small diameter trees, brush, logging slash, mill wastes, and other waste wood.

## Why heat with woody biomass?

### ECONOMIC BENEFITS:

- Lower, more predictable fuel costs
- Maintain or increase local, forest-based jobs
- NOTE: Overall financial benefits depend on many factors. Conversion to wood fuels is not financially advantageous for all schools.

### ENVIRONMENTAL BENEFITS:

- Improve forest health
- Reduce global warming

### NATIONAL SECURITY BENEFITS:

- Lessen dependence on foreign oil and associated costs
- Support development of a clean renewable energy source



## BURN-UP Project Services

2007-2008

1. Conduct a survey to assess the potential for wood heat in UP schools.
2. Provide engineering assessments for selected schools that would like to convert to wood heat.
3. Conduct demonstrations of woody biomass harvesting operations.
4. Conduct tours of wood-fired school heating systems.
5. Develop guidelines for sustainable harvesting of woody biomass.
6. Develop a website on UP woody biomass utilization ([upwoodybiomass.org](http://upwoodybiomass.org)).

### For further information, please contact:

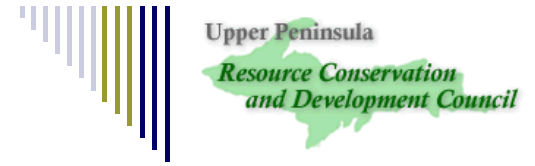
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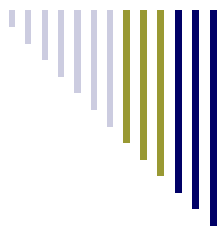
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## Heating U.P. Schools with Woody Biomass

- Save Money
- Improve the Environment
- Increase National Security





# Success Stories: UP Schools that heat with wood

## C-L-K Schools Calumet-Laurium-Keweenaw

**County:** Houghton & Keweenaw

**Town:** Calumet

**Number of Students:** 1,200

**Square Feet:** 251,000

**Years Heating with Wood:** 17 (since 1990)

**Types of Wood Used:** Sawmill & other waste wood

**Type of System:** 100 hp wood-fired boiler with natural gas back-up

**Uses of Wood Heat:** Hot water & steam space heat, domestic hot water

**Savings:** \$100's a day

**Evaluation:** "We are totally committed to using wood for fuel."



## North Dickinson Schools

**County:** Dickinson

**Town:** Felch

**Number of Students:** 400

**Square Feet:** 100,000 + garages

**Years Heating with Wood:** 14 (since 1993)

**Types of Wood Used:** chips

**Type of System:** 100,000 BTU boiler with propane back-up

**Uses of Wood Heat:** Forced air space heat and domestic hot water

**Savings:** About \$20,000 a year

**Evaluation:** "We have a good thing going. Using wood heat frees up a lot of resources for student instruction."



## Other Schools:

### North Central Area Schools, Powers

**County:** Menominee

**Years Heating with Wood:** 15+ (since at least 1992).

**Evaluation:** "We have no plans to stop heating with wood despite the extra maintenance efforts."

### Whitefish Twp School, Paradise

**County:** Chippewa

**Years Heating with Wood:** 15 (since 1992).

**Evaluation:** "We are very enthusiastic about heating with wood due to the big-time cost savings we are realizing."

