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# Making Biofuels Work for a Public Building

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Central Lakes College,  
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# Project Partners

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- Central Lakes College
- University of Minnesota
- Central Region Partnership
- Central Minnesota CERTS
- Staples Motley School



## Unit Costs for Different Fuel Sources

| <b>Fuel Source</b> | <b>Cost/Unit</b> | <b>Cost100,00</b> | <b>BtuEfficiency</b> | <b>Adjusted Cost/Btu</b> |
|--------------------|------------------|-------------------|----------------------|--------------------------|
| Natural Gas        | \$.86            | \$.86             | 85%                  | \$1.01                   |
| LP Gas             | \$1.50           | \$1.57            | 85%                  | \$1.84                   |
| Elect. Off Peak    | \$.04            | \$1.17            | 100%                 | \$1.17                   |
| Fuel Oil           | \$2.35           | \$1.69            | 80%                  | \$2.11                   |
| Oak Wood<br>(Cord) | \$200            | \$.83             | 75%                  | \$1.10                   |
| Corn               | \$2.00           | \$.51             | 85%                  | \$.60                    |
| Corn               | \$2.50           | \$.63             | 85%                  | \$.79                    |
| Corn               | \$3.00           | \$.76             | 85%                  | \$.90                    |
| Corn               | \$3.50           | \$.89             | 85%                  | \$1.05                   |





















HEAT EXTRACTOR

50 60 70 80 90

50 60 70 80 90

HEAT SELECTOR

HEAT EXTRACTOR

SYSTEM

COOL

HEAT

AUTO

A - HEAT EXTRACTOR

B - BACK UP HEAT

C - BOTS







# Project Goals

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Locally Produced Heating Fuel

Study benefits of Land Application of Ash

Save Transportation Costs

Provide Information to Other Public Institutions

Interested in Renewable Fuels