

# Fuels For Schools And Beyond

## Biomass Heating Systems

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# Why focused on Heat?

- Local energy solution –jobs and community funds stay local
- Cost effective at small/med scale
- Heat more valuable than electricity, or biofuels
- Offset fuel oil, propane and nat gas
- Distributed thus lower transportation cost
- CHP – do it where it makes sense

# Heating With Wood Proven Technology

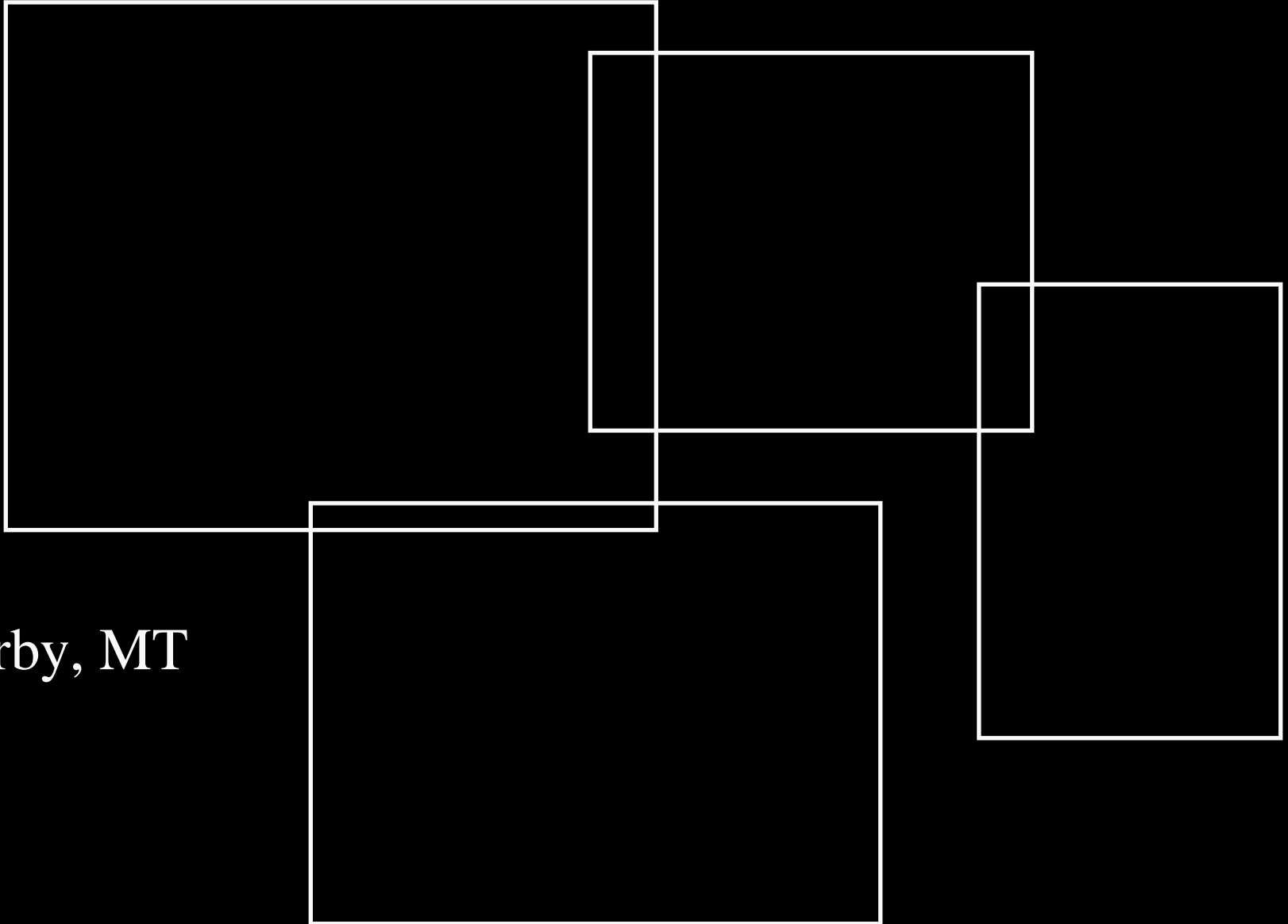
## Multiple Options:

- Fully automated – large facilities
- Surge Bin – small facilities
- Pellet systems
- Chunkwood
- Combined Heat and Power

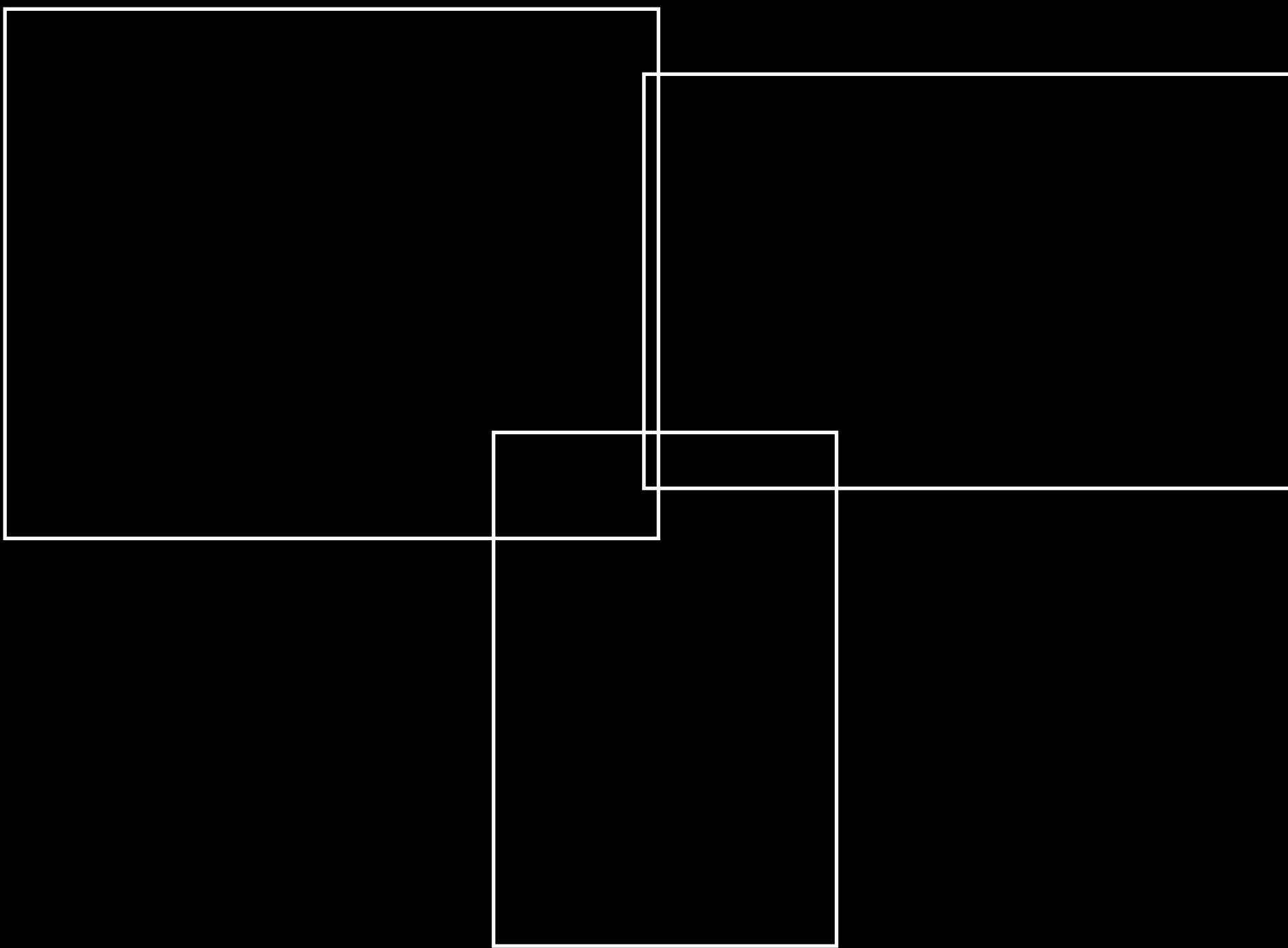
# **Multiple Designs & Configurations**

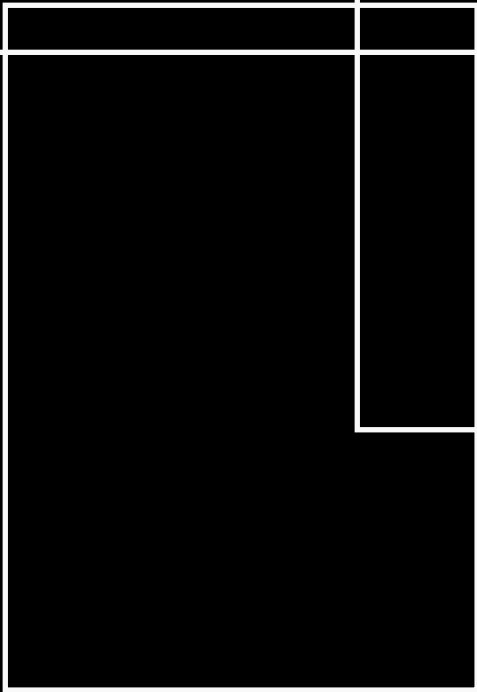
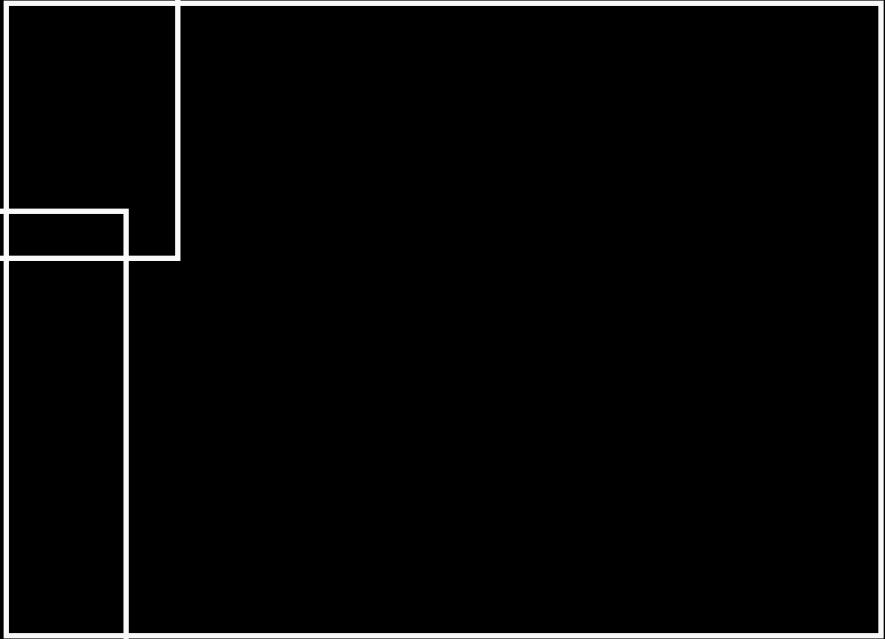
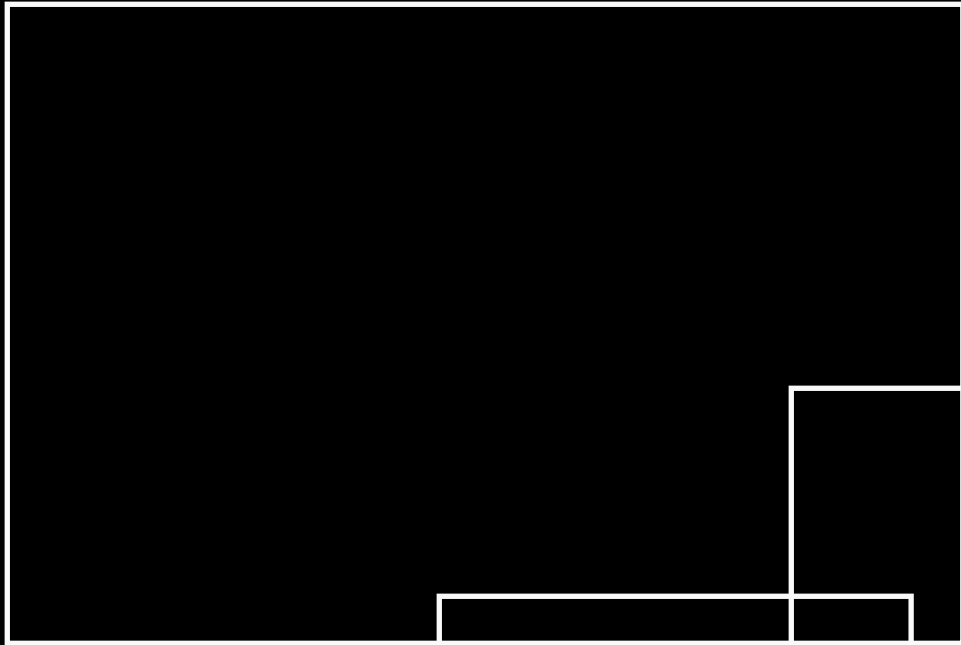
- **Ground Wood or Chips**
  - Sloped grate top-feed
  - Flat grate bottom feed
  - Close couple gasification
  - Augers, conveyors, hydraulic floors
- **Pellet boiler/conveyance**
  - Smaller, simpler, cheaper
- **Others I haven't seen yet...**

# Automated Facility



Darby, MT





# Surge-bin system

Smaller,  
Simpler,  
Cheaper

# Hydraulic Floor

# Close Coupled Gasifier

# Pellet Systems

- Fuel is twice as costly
- Storage smaller, cheaper
- Boiler smaller, cheaper

170 k btu system

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# Pellet Storage

**Garn – chunkwood**

# Combined Heat and Power

- Two products for the price of one +
- Heat worth more than electricity
- Year round heat load to match w/ elec
- Wood mills
- District Heating
- Tax incentives
- RPS, REC,
- C credits

# EERC-Gasifier

# Where can I get more Info

- [www.fuelsforschools.org](http://www.fuelsforschools.org)

**links to:**

- **Manufacturers - consultants;**
- **Biomass Energy Resource  
Center – BEREC's publication:  
Wood-Chip Heating Systems**