Heating with Biomass
Win-Win for Local Economic Development and Energy Security

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Raw Material
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Benefits of Biomass
• Improved National Energy Security
• Increased Economic Growth
• Broad-based Environmental Benefits
Heating with Biomass
Wood #1 Growing Fuel

Key Points
• 65% Growth in PA, NY, OH, & MI
• 12MM Wood Energy Appliances & Stoves in 2005
• Most Affordable Renewable Energy Option for Most Americans
• New EPA Certified Stoves & Fuels

Courtesy of

Heating with Biomass
Wood #1 Growing Fuel

Rise of Residential Wood Heat per Capita in U.S.


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Heating with Biomass
Residential Appliances
Heating with Biomass
Institutional Opportunities

Campus Woodchip Heating System
Heating Capacity: 2.35 MW (8MMBtu/hr)
Annual Wood Fuel Use: 1,200-1,400 tons
Annual (Year) Savings: $2MM (2010)
Cost (Year) Installed: $4.3MM (2002)
Thermal Output: Hot water
Mount Wachusett Community College, Gardner, MA

Wood Pellet Heating System
Heating Capacity: 149 kW (0.5MMBtu/hr)
Annual Wood Pellet Use: 45 tons
Emissions Equipment: Flue gas recirculation
Year Installed: 2007
Thermal Output: Hot water
Harney County District Hospital, Burns, OR

Heating with Biomass
Commercial Applications – Poultry CAFO
Heating with Biomass
Wood Pellet Fuel Producers in 2011

Wood Pellet System Flow Chart--inflow
Pelletizing to Final Product

Sawdust Trailer Unloading
Rotary Dryer

Pellet Mills
Raw Material for Pellets Sustainable?

- Kiln dried byproduct from wood operations…cabinets, flooring
- Green sawdust from primary sawmills
- Sawmill “paper chips” from sawmills
- Whole tree/microchips directly from the forest

Our Plants

[Map of plants across the United States with stars indicating locations.]

Marysville, California
Clark, Nebraska
Pella, Iowa
Schofield, Wisconsin
Circleville, Ohio
Morgan, Maryland
Lebanon, Kentucky
Jamestown, California
Marshall, Texas
American Wood Fibers = 4 Generations of Experience