Biomass Thermal Energy: Legislative Initiatives and Commercial and Industrial Applications

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CEO, North American Biomass Boilers
A North American trade association promoting energy independence through the efficient use of clean, renewable, densified biomass fuel.
Energy Equivalency of Pellet Industry

About 3,000,000 pellet tons— or the same amount of energy in five Ultra Large Crude Carriers (ULCC)
Thermal, The Lost Energy
(Energy Consumption, 2007, from DOE-EIA)

Energy Consumption - By Usage
Quadrillion Btu's

- Transportation: 28%
- Industrial: 22%
- Thermal & Feedstock: 10%
- RES-COM Thermal: 10%
- Electricity: 13%
- Electricity Losses: 27%
The Role of Renewable Energy Consumption in the Nation’s Energy Supply, 2007, from DOE-EIA

Total = 101.605 Quadrillion

- Petroleum: 40%
- Nuclear Electric Power: 8%
- Natural Gas: 23%
- Coal: 22%
- Renewable Energy: 7%

Total = 6.830 Quadrillion Btu

- Solar Energy: 1%
- Hydroelectric: 36%
- Geothermal Energy: 5%
- Biomass: 53%
- Wind Energy: 5%
Efficiency

Biomass Thermal Energy

Usable Energy 80%
Losses 20%

Biomass Electric Energy

Usable Energy 33%
Losses 67%

Usable Energy
Losses

BTEC Biomass Thermal Energy Council
Pellet Fuels Institute
ALLIANCE FOR GREEN HEAT clean, renewable & local
Biomass Heat Uses **ALL** the Fuel Energy

Total BTUs Consumed To Generate One BTU of Usable Fuel Output

- **Gasoline**: 81% Efficiency
- **Corn Ethanol**: 57% Efficiency
- **Cellulosic Ethanol**: 45% Efficiency
- **Wood Pellets**: 82% Efficiency

**DENSIFICATION IS ENERGY EFFICIENT VS OTHER BIOMASS FUELS**
Success Is Market Driven
Current Legislation favors certain Biomass Energies over others

This creates unequal competition in the Raw Material Marketplace

**Access to Feedstock** – The biomass industry needs better access to feedstock. The dead, dying, downed, and diseased wood in our forests could be put to beneficial use. The pellet industry, along with other biomass industries, could utilize this feedstock in a sustainable manner while also helping with forest fire mitigation and suppression. The competition for feedstock highlights an unfair discrepancy for our industry. The biomass thermal industry competes for feedstock materials with other biomass-based renewable energies that receive significant federal support. As a result, feedstock materials costs are distorted in the marketplace. With potential shortages resulting from subsidized competition, our industry faces a precarious situation. PFI is working with the relevant Congressional Committees, the USDA, and the DOI to gain better access to feedstock and influence their efforts.
Legislative Priority - Level The Playing Field

Subsidy Per Million BTUs of Fuel Displaced

All currently subsidized

Now Zero
Demand Side – Legislative Action

IN PROCESS

H.R. 2080, the American Renewable Biomass Heating Act – Sponsored by Representative Paul Hodes (D-NH)

S. 1643, the Cleaner, Secure, and Affordable Thermal Energy Act – Sponsored by Senator Olympia Snowe (R-ME)

Legislation regarding a Commercial/Industrial Biomass Heating Tax Credit to be introduced by Senator Jeanne Shaheen (D-NH) and Representative Paul Hodes (D-NH)

Concentrated Animal Feeding Operations (CAFO) to Fuel Switch
Production Side – Legislative Action

CURRENT LAW

Biomass Crop Assistance Program (BCAP)

IN PROCESS

S. 1094, the Renewable Energy Alternative Production Act (REAP Act) – Sponsored by Senator Ron Wyden (D-OR)
Climate Change/Cap-and-Trade

H.R. 2454, the American Clean Energy and Security Act and S. 1733, the Clean Energy Jobs and American Power Act

- Definition of Biomass
- Certified Stove Program
- Economic Development Climate Change Fund

Agriculture Section
S. 2729, the Clean Energy Partnerships Act – Sen. Stabenow’s (D-MI)

- Potential to be an eligible offset project
- Repowering Assistance
- Rural Energy for America
QUESTIONS?