BTEC
Biomass Thermal Energy Council

Renewable Heating, Cooling, and CHP

The Opportunity of Biomass Thermal Energy

Widespread use of biomass for heating, cooling and combined heat and power (CHP) in the U.S. would reduce greenhouse gas emissions, decrease our dependence on foreign fossil fuels, and create jobs in rural communities hardest hit by the recession. And yet, despite these benefits, biomass thermal energy has been largely overlooked in the discussion on how to address America's energy challenges.

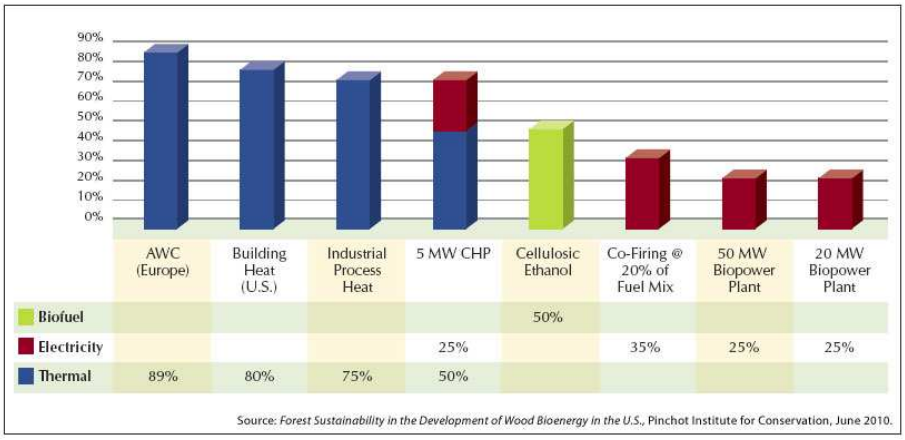
Thermal energy represents roughly one-third of total U.S. energy consumption. It is used daily by homes, businesses and industrial facilities across the country, most frequently for space heating, water heating or industrial processes. Biomass can be an efficient source of renewable energy for all of these heating and cooling needs.

Highly Efficient, Yet Largely Forgotten in Public Policy

Energy efficiency measures the ratio of useful output compared to fuel input, acting like an energy return on investment. Modern and commercially viable biomass heating, cooling, and cogeneration technologies can reach efficiency levels of up to 80-90%. Biomass thermal technologies can generate more usable energy per unit of fuel than better known—and better funded—renewable biomass pathways.

Nevertheless, to date nearly all of the government grants and incentives for renewable energy support the electricity and transportation sectors. Renewable sources of thermal energy, like biomass, have largely gone forgotten in public policy.

Relative biomass conversion efficiency of bioenergy technologies.



Source: *Forest Sustainability in the Development of Wood Bioenergy in the U.S.*, Pinchot Institute for Conservation, June 2010.

Benefits Our Economy, Environment, and National Security

Encouraging the use of biomass for heating and cooling would help fill in the missing pieces of our nation's energy policy. Biomass thermal energy fulfills the same public policy objectives that are the basis and justification for renewable energy tax incentives or subsidies. These include:

- Reducing consumption of foreign fossil fuels, and thereby increasing energy security;
- Lowering emissions of greenhouse gases;
- Strengthening local economic development and job creation through the domestic production of fuels, system installation and service, and fuel distribution.

Helping Build a Market for Renewable Thermal Energy with Government Incentives

Incentives are necessary to make biomass heating and cooling more competitive in the marketplace with non-renewable sources of thermal energy. Policy tools such as thermal Renewable Energy Credits, production and investment tax credits, community grant programs, and biomass supply programs can grow the market and overcome initial adoption costs. In time, with increasing market penetration, these incentives can be scaled down or eliminated.

Federal support must be directed towards projects with the greatest commercial viability and technical merit, no matter their industry. Tax and incentive programs that level the playing field by recognizing the most efficient technologies will guide the U.S. towards energy independence more quickly, cleanly, and affordably. Instead of being the forgotten renewable, biomass thermal must be a key element in America's energy future.

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