U.S. Department of Energy
Energy Efficiency and Renewable Energy
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Biomass

Biomass Organizations & Resources

- U.S. Department of Energy
- U.S. Federal Government
- U.S. State & Local
- U.S. Trade & Nonprofit
- U.S. Universities and Research Institutes
- International Organizations
- Discussion Groups
- Newsletters & Magazines
- Products & Services

Biomass Topics

Biomass technologies use renewable biomass resources to produce an array of energy related products including electricity, liquid, solid, and gaseous fuels, heat, chemicals, and other materials. Bioenergy ranks second (to hydropower) in renewable U.S. primary energy production and accounts for three percent of the primary energy production in the United States.

More basic information about biomass is also available.

Technologies

Biomass Resources

The term "biomass" means any plant derived organic matter available on a renewable basis, including dedicated energy crops and trees, agricultural food and feed crops, agricultural crop wastes and residues, wood wastes and residues, aquatic plants, animal wastes, municipal wastes, and other waste materials. Handling technologies, collection logistics and infrastructure are important aspects of the biomass resource supply chain.

Biopower

Biopower technologies are proven electricity generation options in the United States, with 10 gigawatts of installed capacity. All of today's capacity is based on mature direct-combustion technology. Future efficiency improvements will include co-firing of biomass in existing coal fired boilers and the introduction of high-efficiency gasification combined-cycle systems, fuel cell systems, and modular systems.

Biofuels

A variety of fuels can be made from biomass resources, including the liquid fuels ethanol, methanol, biodiesel, Fischer-Tropsch diesel, and gaseous fuels such as hydrogen and methane. Biofuels research and development is composed of three main areas: producing the fuels, finding applications and uses of the fuels, and creating a distribution infrastructure.

Biobased Chemicals and Materials

Biobased chemicals and materials are commercial or

Biomass News

- Keynote Speakers Announced for Nat Renewable Energy Conference
  August 10, 2006
- DOE and USDA Aw $5.7 Million for Biobased Fuels Research
  August 09, 2006
- Biomass Research Development Tech Advisory Committe Named
  August 09, 2006

industrial products, other than food and feed, derived from biomass feedstocks. Biobased products include green chemicals, renewable plastics, natural fibers, and natural structural materials. Many of these products can replace products and materials traditionally derived from petrochemicals, but new and improved processing technologies will be required.

Integrated Biomass Systems and Assessments
The economic, social, environmental, and ecological consequences in growing and using biomass are important to understand and consider when addressing technological, market, and policy issues associated with bioenergy systems.