

The Role of Biomass in America's Energy Future



U.S. Department of Energy's Interest in This Project

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Outline

- Who are we?
- What is our role?
- What are we about?
- Why this project?



Office of Energy Efficiency and Renewable Energy

Office of the Biomass Program

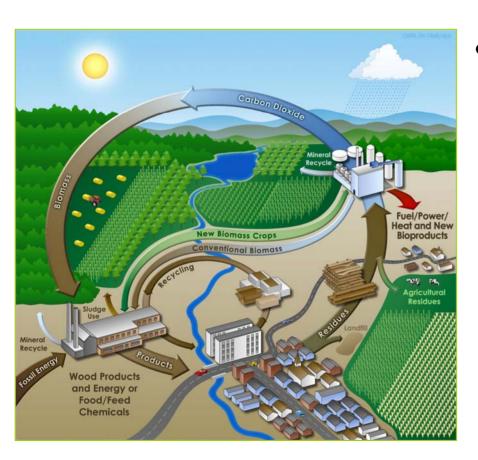


Who are we?

- The Office of the Biomass Program
 - Consolidation of several previously separate programs including
 - Biopower
 - Biofuels
 - Bioproducts
 - Biomass Feedstock Development Program
 - Shift from a collection of loosely aligned technology programs to a single, aligned effort to provide bio-based alternatives to petroleum



Who are we?



Mission of the Biomass Program

- "... foster research and development on advanced technologies that will transform our abundant biomass resources into clean, affordable, and domestically-produced biofuels, biopower, and high-value bioproducts...."



What are we about?

DOE's Strategic Goal

To protect our national and economic security by promoting a diverse supply of reliable, affordable and environmentally sound energy

EERE Strategic Goals

Dramatically reduce or even end dependence on foreign oil
 Create the new, domestic bioindustry

Biomass Program Goals

Feedstock Goal

To develop sustainable technologies capable of supplying lignocellulosic biomass to biorefineries producing fuels, chemicals, heat and power

Sugar Platform Goal

To develop the capability for using lignocellulosic biomass to produce inexpensive sugar streams that can be utilized for the production of fuels, chemicals and materials

Thermochemical Platform Goal

To develop the capability of thermochemically converting biomass into simple building blocks for the production of fuels, power, hydrogen, chemicals and materials.

Products Goal

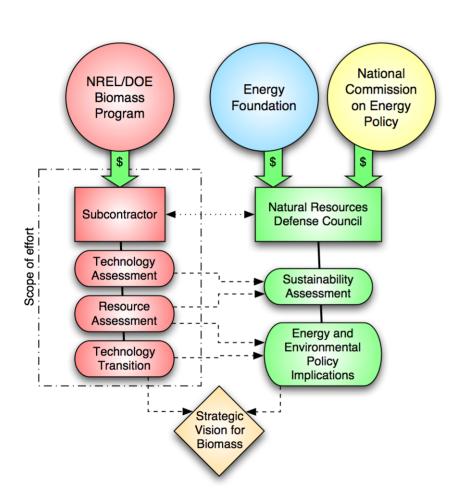
To develop the capability to produce fuels, power, chemicals and/or materials utilizing intermediates from thermochemical and sugar platforms.

Integrated Biorefinery Goal

To support the establishment of integrated biorefineries through partnerships with industry and academia



What is our role?

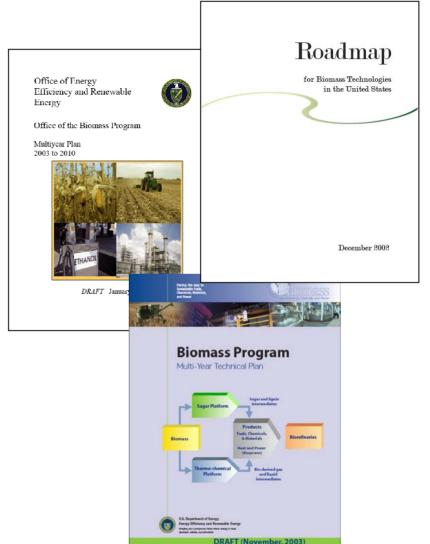


- DOE's Office of the Biomass Program is funding the technical analysis needed to develop a strategic vision for biomass
- DOE's National
 Bioenergy Center is
 also carrying out some
 of the technical analysis



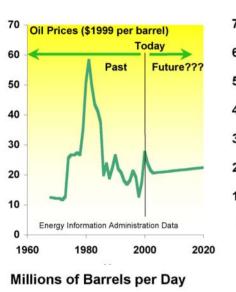
Why this project?

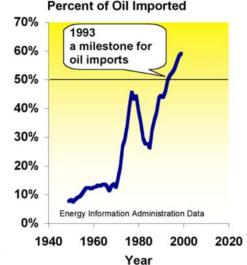
- The need for a long term vision and direction
 - Ongoing uncertainty
 about what role biomass
 (or any renewable energy
 source) can play
 - Focus of DOE plans tend be near to mid term
- What we lack is a vision of deployed biomass technology--one which this project strives to define

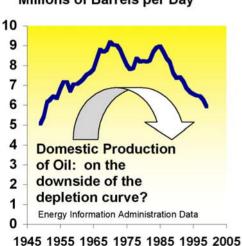


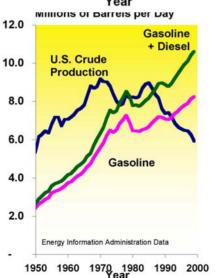


Why this project?









We face a huge and daunting task

- "...fossil fuels are a onetime gift that lifted us up from subsistence agriculture and eventually should lead us to a future based on renewable resources."
 - Kenneth Deffeyes in Hubbert's Peak (2001)



Why this project?



This project takes the seriousness of our energy problem to heart by

- Acknowledging the need for change at the societal as well as the technical level
- Daring to question the near-sighted paradigms that prevent real advancement
- Assembling the kind of multi-disciplinary team that is needed to analyze our options for biomass