



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

biomass program

30x30 Workshop Overview & Outcomes

John Ferrell
Technology Manager
Office of the Biomass Program
Office of Energy Efficiency and Renewable Energy
August 1, 2006



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

The President's Biofuels Initiative

- The specific goals of the AEI related to biomass are:
 - To make cellulosic ethanol cost competitive by 2012.
 - To reduce the nation's dependence on foreign oil by levels equivalent to 75 percent of Middle East oil imports by 2025.
- The Office of the Biomass Program has set specific R&D targets that will help to meet the broader goals of the AEI:
 - To achieve \$1.07 cellulosic ethanol by 2012.
 - To achieve 60 billion gallons of ethanol (or 30 percent of 2004 gasoline consumption equivalent) by 2030.



Gain key *industry* stakeholder input in developing a strategic plan that supports the President's AEI goals related to biomass



- Current OBP & EPOA 2005 Focus:
 - Biofuels are any biomass derived liquid transportation fuel that are fungible in today's transportation fuel supply. Specifically, the near term biofuels that the Biomass Program is focused on are 1) ethanol, 2) biodiesel, and 3) renewable (green) diesel.
- It is up to each working group to decide whether or not other options should be included
- Working groups are based on the biomass resources identified in the Billion Ton Study, from which OBP has developed these biorefinery pathways:
 - Corn Wet/Dry Mill Processing
 - Agricultural Residues
 - Oils Pathway
 - Woody Crops (Perennials 1)
 - Herbaceous Crops (Perennials 2)
 - Forest Resources
- Plus an Infrastructure Working Group



Scope of Working Group Pathways

- Corn Wet/Dry Mill Processing
 - improve the overall operation of today's corn ethanol production facilities by incorporating new technologies that use residues/intermediates from the existing corn milling processes to increase yields of ethanol
- Agricultural Residues
 - develop and demonstrate new commercially-viable processes and systems to convert farm residues from current grain crop production activities (e.g., corn stover and wheat straw) to ethanol
- Oils Pathway
 - introduce new low-cost natural oil feedstocks (recycled fats and greases, and new oil seed crops) into today's natural oil processing facilities for increased biodiesel fuel production
- Woody Crops (Perennials 1)
 - develop and demonstrate new commercially-viable processes and systems to convert woody energy crops to ethanol



Scope of Working Group Pathways

- Herbaceous Crops (Perennials 2)
 - develop and demonstrate new commercially-viable processes and systems to convert dedicated perennial herbaceous energy crops to ethanol
- Forest Resources
 - improve the economics of existing primary wood processing mills through more efficient utilization of wood feedstocks and process residues (hog fuel) for the production of ethanol
- Infrastructure
 - Day one will focus on the infrastructure requirements for processes from feedstock to pump
 - Day two will focus on the infrastructure requirements for processes from pump to widespread use of biofuels



Workshop Participant Roles

- Invitees consist primarily of industry, academic & other external experts in a variety of topical areas:
 - Feedstock
 - Conversion technology
 - Policy
 - Environmental
 - Infrastructure
- National Laboratory experts will be on hand to address technical questions, as needed.
- Some Federal employees have been invited to serve as *observers*
- Federal POCs have been identified for each agency conducting biomass-related work:
 - DOE
 - USDA
 - DOI
 - DOT
 - EPA
 - NSF
 - OSTP
 - As well as other EERE program offices
- Each working group has a DOE lead, an industry lead, a facilitator, and a note taker



Desired Outcomes

- Collect industry input on key questions regarding 2012 and 2030 goals for each working group.
- From industry input, OBP will develop a draft strategic plan to achieve OBP internal goals as they relate to the goals of the AEI. The plan will not only include R&D targets, but will address policy and infrastructure needs that may be outside of direct OBP purview.*
- A follow-up meeting to this workshop will be held to develop a “Posture Plan” that outlines the role that each Federal agency and office involved in biomass-related work will play in achieving the goals of the AEI.

*This report will be made public after finalized. Please keep that in mind during your working group sessions.