



Biomass, the Energy Policy Act of 2005 and the President's Biofuels Initiative

John Ashworth
Team Leader, Partnership Development
National Bioenergy Center
National Renewable Energy Laboratory
Golden, Colorado

Bioenergy & Wood Products II Conference
March 14, 2006

EPACT 2005 Woody Biomass Provisions

Section 210: USDA *may* issue grants to improve commercial value of forest biomass for electric power, heat etc

- Preferred communities can get up to \$500K total or up to \$20/ton of green forest biomass for forest biomass utilization

Section 209: DOE *may* issue grants for Rural and Remote community Electrification

- \$20 million/year in grants for increased efficiency or use of renewable energy including woody biomass

Section 944: USDA *may* issue grants for Small Business Bioproduct Marketing and Certification

- Matching grants up to \$100K, for a total of \$1 million/year

Energy Policy Act of 2005: Cellulosic Biomass Provisions

Section 932: Integrated Biorefinery Demonstration Projects

- Solicitation criteria to include commercial-scale demonstration of a variety of lignocellulosic feedstocks (including wood and forest slash)

Section 942: Production Incentives for Cellulosic Biofuels

- Achieve 1 billion gallons annually by 2015
- Secretary of Energy shall set a per gallon incentive to be automatically awarded
- After the first year that 1 billion gallons are produced, incentives shall be awarded via a reverse auction

Sections 1511 & 1512: Cellulosic Biomass & Renewable Fuels

- The Secretary may issue grants for the production of renewable fuels from cellulosic biomass

Energy Policy Act of 2005: Cellulosic Provisions

Section 1510: Commercial Byproducts from Municipal Solid Waste and Cellulosic Biomass Loan Guarantee Program

- Secretary of Energy shall provide guarantees of loans by private institutions for the construction of facilities for the processing and conversion of municipal solid waste and cellulosic biomass into fuel ethanol and other commercial byproducts

Section 1511: Renewable Fuel

- Secretary of Energy *may* guarantee loans to cover cost of loan guarantees to carry out commercial demonstration projects for cellulosic biomass and sucrose-derived ethanol

Section 1501: Renewable Fuel Standard – (including cellulosic ethanol)

Year	Renewable Fuels (billions of gallons)
2006	4.0
2007	4.7
2008	5.4
2009	6.1
2010	6.8
2011	7.4
2012	7.5

DOE Response to EPAct 2005

Section 932: Integrated Biorefinery Demonstration Projects

- The Secretary announced the solicitation in mid-February 2006
- 40% federal /60% industrial cost-share
- Federal grants will range from \$50 – 80 million and be spread out of 3 – 4 years
- DOE expects to make 2 – 3 awards
- Plants must use at least 700 dry tons/day of cellulosic biomass (not starch) to produce liquid transportation fuels, biobased chemicals or substitutes for petroleum-based feedstocks
- Proposals due August 10, 2006

DOE Response to EPAct 2005 (cont.)

Loan Guarantee Programs

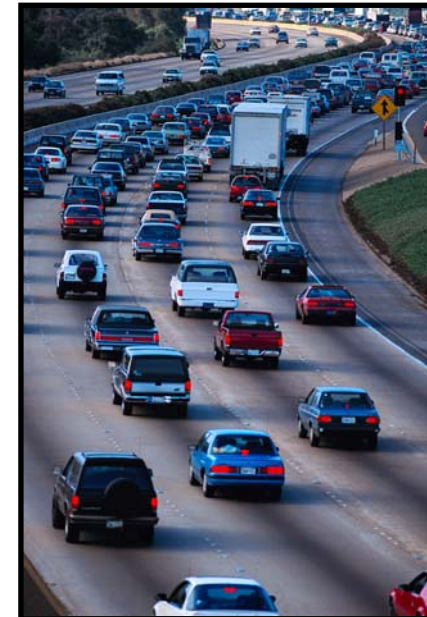
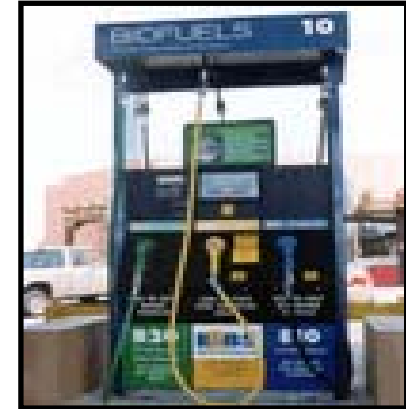
- DOE is currently in Program design phase. Initial considerations include:
 - **Funding for loan guarantees:**
 - No appropriations or Congressional funding
 - Applicants will “self – fund”, or pay 5 – 18% of guaranteed amount to Treasury
 - **Program Administration - Small Loan Guarantee office will:**
 - Set up DOE and Treasury accounts
 - Oversee legal definitions and rules
 - Determine guarantee procedures
 - **Timeline:**
 - Deputy Secretary signed approval to initiate loan program early February 2006
 - Small Loan Guarantee Office to be set up by end of February or early March

President's Biofuels Initiative

The President's Goals:

Replace the equivalent of more than 75 percent of our oil imports from the Middle East by 2030 – 30% of gasoline pool or 60 billion gallons/year

2012 Goal: Fund additional research in cutting-edge methods of producing ethanol, not just from corn, but from wood chips and stalks, or switchgrass. DOE goal is to make cellulosic ethanol practical and cost-competitive (\$1.07/gal) within 6 years



“America is Addicted to Oil

Producing ethanol not just from corn, but from wood chips and stalks, or switchgrass

What the Initiative Provides

Investigate the Conversion of a much broader number of possible feedstocks

Develop regional feedstock partnerships to identify local opportunities for feedstock production and ethanol production

Re-establish the Thermo-Chemical conversion technology as a second possible pathway to success

Research in Cutting-edge Methods of Producing Ethanol

DOE goal is to make Cellulosic ethanol practical and cost-competitive (\$1.07/gallon) within six years

What the Initiative Provides

Accelerate the present efforts to extract and ferment the sugars in corn stover to ethanol at a cost competitive price

Leveraged our results in converting corn stover to the broad variety of feedstocks

Augment research in conversion and fermentation technologies



Biomass Program Funding

Activity	Funding (\$ in thousands)		
	FY 2005	FY 2006	FY 2007
	Approp	Approp	Request
Feedstock Infrastructure	1,984	479	9,967
Platforms R&D	29,288	15,140	50,530
Utilization of Platform Outputs R&D	20,473	23,322	89,190
Congressionally Directed Activities	35,332	51,777	0
Technical/Program Management	394	0	0
TOTAL	87,471	90,718	149,687