

*Biomass Research and Development Technical
Advisory Committee*

April 01, 2010

Washington, DCA

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Biofuels Interagency Working Group

On May 5, 2009, President Obama signed the directive establishing a new working group to be chaired by the Secretaries of Energy and Agriculture, and the Administrator of the EPA.

The group will work with the National Biomass Research and Development Board on:

- Creating a *biofuel market development program* to boost next-generation biofuels, increase use of flex-fuel vehicles, and assist retail market development
- Coordinating infrastructure policies

President's Steps to Boost Biofuels

- **Comprehensive Strategy**
 - Enhance American Energy Independence
 - Foundation for New Clean Economy
 - New Industries and Jobs

President's Steps to Boost Biofuels

- Biofuels Working Group Report (Growing America's Fuels)
- Roadmap for accomplishing 36 billion gallons by 2022
- Leveraging resources to support 1st, 2nd and 3rd generation renewable fuels
- Reduce financial risk to farmer, ranchers, and forest land owners to invest (BCAP proposed rule)

USDA's Other Clean Energy Initiatives and Investments

- FY 10 and FY 11 President's Budget
- Support for other Renewable Energy/Energy Efficiency Investments
- Marketing and Outreach
- Evaluation of Program Delivery
- Coordination/collaboration with other Departments (DOE and DON)

2008 Farm Bill Title IX and USDA Rural Development Advanced Biofuels Programs



- **Section 9003: Biorefinery Assistance Program –**
 - Provides **loan guarantees** of up to \$250 million for the development, construction and retrofitting of commercial-scale bio-refineries

- **Section 9004: Repowering Assistance –**
 - Provides **payments** to existing bio-refineries to replace fossil fuels used to produce heat or power to operate the bio-refineries with renewable biomass.
 - Five applications under review, ~ \$13.5 million

- **Section 9005: Bioenergy Program for Advanced Biofuels –**
 - Provides **payments** to eligible agricultural producers to support and ensure an expanding production of advanced bio-fuels
 - Payments of \$14.5 million awarded to 136 producers

Section 9003 Biorefinery Assistance

Summary details

- **3 Awards**
 - **Range Fuels Inc., Soperton, Georgia for \$80 million, 1/16/09**
 - **SoyMor, LLC, Albert Lea, Minnesota for \$25 million, 6/30/09**
 - **Sapphire Energy, Columbus, New Mexico, \$54.5 million, 12/4/09**

- **17 applications received**

- **Technologies:**
 - **Cellulosic ethanol (4)**
 - **Biodiesel (6)**
 - **Green diesel from pulpwood (paper mill)**
 - **Anaerobic digesters (3)**
 - **Other (4)**
 - **Anhydrous ammonia**

Section 9007 -- Rural Energy for America Program (REAP)

Formerly Section 9006 – Renewable Energy Systems and Energy Efficiency Improvements Program (Established in '02 Farm Bill)

- Notices of Funding Availability
- Proposed Rule Pending

Renewable Energy Investments, 2003 - 09

Renewable Energy Systems and Energy Efficiency Conversion Projects

Technology	Number of Projects	Grants, Loans, & Combos Amount	Amount Leveraged
Biomass	320	89,993,200	380,365,833
Wind	361	73,651,189	641,098,744
Solar	274	14,077,343	37,930,249
Geothermal	99	3,080,395	8,374,339
Hybrid	22	2,935,648	86,720,575
Hydropower	4	1,064,432	2,475,253
Subtotal	1,080	184,802,207	1,156,964,993
Energy Efficiency	2,428	80,566,465	192,211,677
EA/REDA	22	2,173,631	
Feasibility Study	50	1,244,600	
Combined Funding Activities	3,580	268,786,903	1,349,176,670

EA/REDA – Energy Audits/Renewable Energy Development Assistance

Farm Bill – Energy Title

Section 9008- Biomass Research and Development

- Delegation of Authority for R&D Initiative
- Status of FY 2010 Solicitation
- Initial Board meeting on March 10, 2010

Agriculture and Food Research Initiative

Topic: Sustainable Bioenergy

- Development of regional systems for the sustainable production of bioenergy and biobased products
- Focus is on five dedicated feedstocks
- Environmental, economic, and social prosperity for rural communities
- Innovative
Research+Education+Extension
Collaborative Multi-disciplinary work
- www.nifa.usda.gov

Sustainable Bioenergy

1. Regional Approaches to Sustainable Bioenergy Coordinated Agriculture Project (CAP)
2. Regional Approaches to Sustainable Bioenergy CAP Planning grant
3. Sustainable Bioenergy Research
4. Investing in America's Scientific Corps: Stimulating a New Era of Students and Faculty in Bioenergy
5. National Loblolly Pine Genome Sequencing

Regional Approaches to Sustainable Bioenergy CAP Priorities

- Present a coordinated plan for developing a regional system for the sustainable production and distribution of biofuels, bioenergy and biobased products with net positive social, environmental, and economic effects
- Multidisciplinary/transdisciplinary approach that leverages existing federal, university, and private industry efforts through research, extension, and education
- Should focus on one or more USDA identified feedstocks as regionally appropriate

Sustainable Bioenergy Research 2010 Priorities for Standard Grants

Must be relevant to development of sustainable regional systems for bioenergy production and biologically-based products:

- Feedstock Crop Protection—evaluate and mitigate pests and beneficial species associated with energy crops.
- Enhanced-Value Co-products—develop knowledge of biological, chemical, and thermo-chemical processes to produce valuable co-products and industrial polymers.
- Carbon Sequestration—targets analysis of impacts of bioenergy feedstock production on carbon cycling and greenhouse gas emissions.

Biomass Research and Development Initiative

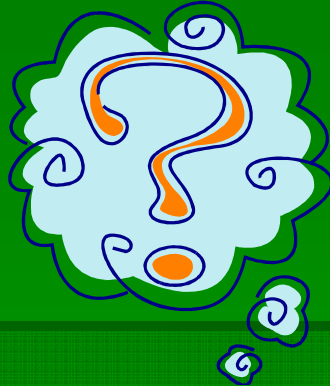
- FY 2010 solicitation announced in April
 - \$28M from USDA, \$5M from DOE
- Supports technologies and processes necessary for abundant commercial production of biofuels at prices competitive with fossil fuels
- High-value biobased products-
 - to enhance the economic viability of biofuels and biopower;
 - to serve as substitutes for petroleum-based feedstocks and products;
 - to enhance the value of coproducts
- Diversity of biomass produced sustainably for conversion to biofuels, bioenergy and biobased products

Biomass Research and Development Initiative

- (A) Feedstock Development – R&D activities that include development, production, logistics
- (B) Biofuels and Biobased Products Development – technologies for the use of cellulosic biomass in the production of biofuels and/biobased products;
 - product diversification for production of biobased products (including chemicals, animal feed, and cogen power) that can increase feasibility of fuel production in a biorefinery
- (C) Biofuels Development Analysis -
 - strategic guidance to improve sustainability
 - evaluate energy and environmental impact
 - assessment of Federal land

Biomass Research and Development Initiative and Agriculture and Food Research Initiative are Complementary:

- Focus on advanced biofuels
- Sustainability is the overarching theme
- Consortia of experts/comprehensive approach
- Not region specific **vs** region specific
- Integration of the 3 technical areas **vs** integration of functions (research, education, extension for CAPs)
- Broad feedstock options **vs** 5 feedstocks
- Focus on feedstocks and conversion technologies **vs** focus on feedstocks
- Support for cellulosic ETOH **vs** no support for ETOH



Any Questions?

