



RENEWABLE ENERGY AND BIOBASED PRODUCTS

Background

In fiscal year (FY) 2005, U.S. ethanol and biodiesel production made from all sources was 3.73 billion gallons and 66.2 million gallons, respectively. Corn used in ethanol production was 1.338 billion bushels. U.S. biodiesel made from soybean oil was 60.6 million gallons, which required 39.3 million bushels of soybeans. The value of these biofuels to the U.S. economy totaled \$8 billion. Additionally, other biobased products such as biobased chemicals and plastics continue to emerge.

Title IX of the 2002 farm bill, commonly known as the Energy Title, includes a series of provisions to expand production of bioenergy and bioproducts and promote energy conservation.

Section 9006 established the Renewable Energy Systems and Energy Efficiency Improvements Program—authorizing USDA loans, loan guarantees, and grants to farmers, ranchers, and rural small businesses to purchase renewable energy systems and to make energy-efficient improvements. Congress provided \$23 million to fund the program in each of FY 2003, 2004, 2005, and 2006.

This program strives to help rural America reduce energy consumption and costs; assist the Nation in meeting its energy needs; stimulate rural economic development; create new jobs; and develop new uses for agricultural products and waste materials.

Section 9006 grant requests may not exceed 25 percent of the eligible project costs. Grant applications for renewable energy systems must be no more than \$500,000, and applications for energy efficiency improvements must be no more than \$250,000. In FY 2003 and 2004, a total of \$44 million in grants was awarded to 281 agricultural producers and rural small businesses in 33 States.

Section 9008 reauthorized the Biomass Research and Development Act of 2000 and provided \$75 million in funding from the Commodity Credit Corporation for 2002 through 2007. In the last 3 years, the program has awarded \$40.8 million for 39 research, development, and demonstration projects on biobased products, bioenergy, biofuels, biopower, and related processes.

In addition to these two farm bill programs, Section 9002 provided funding for the testing of biobased products and established a Federal procurement program for biobased products. Section 9004 established the Biodiesel Fuel Education Program to make competitive grants to

eligible entities to educate governmental and other entities and the public about the benefits of biodiesel fuel use.

The Bioenergy Incentives Program operated by the Commodity Credit Corporation provided incentive payments to encourage increased purchases of eligible commodities for the purpose of expanding production of ethanol and biodiesel and supporting new production capacity of these biofuels. The program provided over \$500 million in awards between 2001 and 2005. Up to \$60 million is available for the program in FY 2006. The program expires at the end of FY 2006.

USDA also provides loan guarantees for production of renewable energy and biofuels through the Rural Development Business and Industry Loan Program, through section 9006 of the 2002 farm bill, and through the Rural Utilities Service.

General Opinions Expressed

- Commenters generally expressed support for retaining or expanding Title IX of the farm bill—to help farmers and rural small businesses slash energy bills and build new income opportunities.
- Many requested that the Section 9006 program funding be significantly increased and that USDA support an increase in the production of farm-based renewable energy of all types (anaerobic digestion, crop fermentation energy, liquid fuels, etc.); many also stated that farm-based renewable products could be the linchpin of a new long-term model of farm sustainability.
- Many comments suggested that it would be necessary to increase the amount of, and the priority for, research and development in support of the sustainable production of biofuels.
- USDA was encouraged to better promote the benefits of bio-refineries so that farmers can adopt practices that yield many co-products, increase farm incomes, and stabilize cash flow.
- Some asked for full implementation of segments of the 2002 farm bill that help farmers and agribusinesses develop and market renewable energy resources and biobased products.
- Others suggested pilot tests for new uses for manure such as energy generation, composting, and restoration of abandoned lands. Others suggested utilizing municipal solid waste as a feedstock for conversion to ethanol, creating a valued commodity with numerous industrial and commercial applications.
- Some suggested that USDA better educate consumers about the benefits of ethanol and biodiesel.
- Many suggested that USDA offer new renewable energy subsidies, and others suggested incentives to encourage renewable power use by farmers.
- Some suggested that the Government deregulate its control over rules for development of ethanol and let the free market determine price and supply.
- Commenters generally supported tapping a viable renewable energy source as an alternative to petroleum for marketing to either domestic or foreign markets.
- Some suggested that USDA promote the wide-ranging benefits of renewable energy for the farm community by directly legislating mandates within the next farm bill.
- USDA was encouraged to continue efforts to promote the use of woody biomass from public and private forestlands for sustainable rural development purposes.

Detailed Suggestions Expressed

- Frustration was expressed about our country's 60 percent dependence on other countries for oil. There is a need for an energy policy that works for farmers. The commenter is pushing to mandate 10 percent ethanol in all gasoline and 5 percent biodiesel in all diesel fuel.
- Agriculture must move beyond food and fiber and add fuel as the third arm of its production portfolio. Provide incentives for both producers and end-users of ethanol and biodiesel until they are able to directly compete with large petroleum companies.
- Green power from biomass crops provides an opportunity for agricultural and energy sectors to work together to find profitable and sustainable new crops for producing base-load electricity, liquid transportation fuel, and synthetic natural gas. Farmers and ranchers will contract with Fortune 500 companies and others and be paid for removing non-point emissions of carbon dioxide and methane.
- The Rural Development Title should provide incentives to accelerate development and commercialization of a variety of bioproducts. Consideration should be given to a pilot program for buying and selling of carbon credits.
- Biofuel cooperatives should be created so small farmers could bring their crops to be converted into biofuels that can supply the energy needs of local communities and help to revitalize small family farms.
- The Section 9006 program should set aside 10–15 percent of the grant funds for small projects up to \$50,000, allowing small projects to compete against other small projects and remedying the bias toward funding large projects. In FY 2004, only 2.6 percent of the funds went to small wind and solar projects. The commenter also suggested a simpler application; taking applications anytime until funds are expended; eliminating the “residential use” prohibition; and limiting funding to new equipment.
- The Commodity Credit Corporation should be reauthorized at a respectable level—it is targeted to be zeroed out in 2007.
- Hydroelectric power should be included as an eligible purpose for loans or grants from the alternative energy production program.
- Crop rotation systems that include alfalfa save 292,000 tons of anhydrous ammonia equivalent fertilizer each year. Using alfalfa in crop rotations should be part of an agriculture program for U.S. energy independence.
- Funds for hydroelectric in remote Alaska, where energy is especially costly, and hydroelectric generation is environmentally the best solution, should be included.
- The Section 9006 program, as currently structured, is providing windfall benefits to a few, and scant opportunities for the many. In 2005, 35 commercial wind projects in 2 States (MN and IA) received 32 percent of the total funding. Oklahoma farmers, who may have better wind resources and could produce electricity cheaper, cannot compete. USDA should restructure the program to resolve these inequities.
- Use the \$500 million allocated to drilling in the Alaska National Wildlife Refuge to build biodiesel plants.

- Renewable energy investment funds should not be diverted to factory farms to subsidize digesters turning unmanageable amounts of animal manure into energy. Funds should instead be used to help family farmers develop clean, safe, renewable energy projects that harness the wind and the sun.
- Much emphasis and funding has been plowed into development of ethanol and biodiesel fuels derived from “heavily subsidized” agricultural crops. These annual crops require incredible input costs (irrigation, fossil fuel, fertilizer, pesticides) to grow. Other long-lived perennial, nonsubsidized crops (trees, grass) need equal time with research and development funding.
- Support a competitive research program for fuels, chemicals, and energy from biomass.
- The biobased energy provisions contained in the 2002 farm bill should serve as a springboard for the expansion of agricultural-based energy research and development and called for the creation of a biobased strategic energy reserve.
- Extend the deadline for renewable energy grant applications to help farmers who are sometimes pressed to meet the deadline due to the short time period between publication of rules governing the program and the application deadline.
- The USDA should terminate the Conservation Reserve Program and use those funds to support a biodiesel program with payments to growers for growing oilseed crops.