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## **Biofuels Incentives: A Summary of Federal Programs**

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# Biofuels Incentives: A Summary of Federal Programs

## Summary

With recent high energy prices and the passage of major energy legislation in 2005 (P.L. 109-58), there is ongoing congressional interest in promoting alternatives to petroleum fuels. Biofuels — transportation fuels produced from plants and other organic materials — are of particular interest. Ethanol and biodiesel, the two most widely used biofuels, receive significant government support under this law in the form of mandated fuel use, tax incentives, loan and grant programs, and certain regulatory requirements.

The 14 programs and provisions listed in this report have been established over the past 26 years, and are administered by five separate agencies and departments: Environmental Protection Agency, U.S. Department of Agriculture, Department of Energy, Internal Revenue Service, and Customs and Border Protection. These programs target a variety of beneficiaries, including farmers and rural small businesses, biofuel producers, petroleum suppliers, and fuel marketers. Arguably, the most significant federal programs for biofuels have been tax credits for the production or sale of ethanol and biodiesel. However, with the establishment of the renewable fuels standard (RFS) under P.L. 109-58, Congress has mandated biofuels use. In the long term, this mandate may prove even more significant than tax incentives in promoting the use of these fuels.

This report outlines federal programs that provide direct or indirect incentives for biofuels. For each program described, the report provides details including administering agency, authorizing statute(s), annual funding, and expiration date. The **Appendix** provides summary information in a table format. This report will be updated as events warrant.

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# Biofuels Incentives: A Summary of Federal Programs

## Introduction

With recent high energy prices and the passage of the Energy Policy Act of 2005 (P.L. 109-58), there is ongoing congressional interest in promoting greater use of alternatives to petroleum fuels. Biofuels — transportation fuels produced from plants and other organic materials — are of particular interest. Ethanol and biodiesel, the two most widely used biofuels, receive significant federal support in the form of tax incentives, loan and grant programs, and regulatory programs.<sup>1</sup>

This report outlines 14 current federal programs and provisions (plus one authorized but unfunded program) that provide direct or indirect incentives for biofuels. The programs are grouped below by administering agency. The incentives for biofuels are summarized in the **Appendix**. This information is compiled from authorizing statutes, committee reports, and Administration budget request documents.

## Environmental Protection Agency (EPA)

### Renewable Fuel Standard

*Administered by:* EPA

*Annual funding:* N/A

*FY2007 budget request:* N/A

*Established:* 2005 by the Energy Policy Act of 2005, §1501 (P.L. 109-58, H.R. 6)

*Scheduled termination:* None

*Description:* The Energy Policy Act of 2005 established a renewable fuels standard (RFS) for automotive fuels. The RFS requires the blending of renewable fuels (including ethanol and biodiesel) in gasoline.<sup>2</sup> In 2006, fuel suppliers must blend 4.0 billion gallons of renewable fuel into gasoline, increasing annually to 7.5 billion

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<sup>1</sup> For more information on ethanol, see CRS Report RL33290, *Fuel Ethanol: Background and Public Policy Issues*, by Brent D. Yacobucci. For more information on biofuels in general, see CRS Report RL30758, *Alternative Transportation Fuels and Vehicles: Energy, Environment, and Development Issues*, by Brent D. Yacobucci, and CRS Report RL32712, *Agriculture-Based Renewable Energy Production*, by Randy Schnepf.

<sup>2</sup> The requirement is for renewable fuel in gasoline. However, biodiesel is blended with diesel fuel, not gasoline. P.L. 109-58 requires EPA to promulgate regulations for blenders to earn and trade renewable fuel credits for biodiesel blending.

gallons in 2012. For subsequent years, EPA is required to set a minimum ratio for renewable content, no less than the ratio in 2012. By August 2007, EPA must promulgate regulations for the program, including a market-based credit banking and trading system. While this program is not a direct incentive for the construction of biofuels plants, the guaranteed market created by the renewable fuel standard is expected to stimulate growth of the biofuels industry.

## **Internal Revenue Service (IRS)**

### **Volumetric Ethanol Excise Tax Credit**

*Administered by:* Internal Revenue Service

*Annual funding:* N/A

*Established:* 2005 by the American Jobs Creation Act of 2004, §301 (P.L. 108-357)

*Scheduled termination:* December 31, 2010

*Description:* Gasoline suppliers who blend ethanol with gasoline are eligible for a tax credit of 51 cents per gallon of ethanol.

*Qualified applicant:* Blenders of gasohol (i.e., gasoline suppliers and marketers)

*For more information:* IRS Publication 378: Fuel Tax Credits and Refunds [<http://www.irs.gov/pub/irs-pdf/p378.pdf>]

### **Small Ethanol Producer Credit**

*Administered by:* Internal Revenue Service

*Annual funding:* N/A

*Established:* 1990 by the Omnibus Budget Reconciliation Act of 1990, §11502 (P.L. 101-508); expanded by the Energy Policy Act of 2005, §1347 (P.L. 109-58)

*Scheduled termination:* December 31, 2007

*Description:* The small ethanol producer credit is valued at 10 cents per gallon of ethanol produced. The credit may be claimed on the first 15 million gallons of ethanol produced by a small producer in a given year.

*Qualified applicant:* Any ethanol producer with production capacity below 60 million gallons per year

*For more information:* IRS Publication 378: Fuel Tax Credits and Refunds [<http://www.irs.gov/pub/irs-pdf/p378.pdf>]

### **Biodiesel Tax Credit**

*Administered by:* Internal Revenue Service

*Annual funding:* N/A

*Established:* 2005 by the American Jobs Creation Act of 2004, §302 (P.L. 108-357); extended by the Energy Policy Act of 2005, §1344 (P.L. 109-58)

*Scheduled termination:* December 31, 2008

*Description:* Biodiesel producers (or producers of diesel/biodiesel blends) can claim a per-gallon tax credit. The credit is valued at \$1.00 per gallon of “agri-biodiesel” (biodiesel produced from virgin agricultural products such as soybean oil or animal fats), or 50 cents per gallon of biodiesel produced from previously used agricultural products (e.g., recycled fryer grease).

*Qualified applicant:* Biodiesel producers and blenders

*For more information:* IRS Publication 378: Fuel Tax Credits and Refunds  
[<http://www.irs.gov/pub/irs-pdf/p378.pdf>]

## **Small Agri-Biodiesel Producer Credit**

*Administered by:* Internal Revenue Service

*Annual funding:* N/A

*Established:* 2005 by the Energy Policy Act of 2005, §1345 (P.L. 109-58)

*Scheduled termination:* December 31, 2008

*Description:* The small agri-biodiesel producer credit is valued at 10 cents per gallon of “agri-biodiesel” (see Biodiesel Tax Credit, above) produced. The credit may be claimed on the first 15 million gallons of ethanol produced by a small producer in a given year.

*Qualified applicant:* Any agri-biodiesel producer with production capacity below 60 million gallons per year

*For more information:* National Biodiesel Board,  
[<http://www.nbb.org/news/taxincentive/>]

## **Department of Agriculture (USDA)**

### **Bioenergy Program**

*Administered by:* Commodity Credit Corporation (CCC)

*Annual funding:* \$100 million appropriated for FY2005, \$60 million for FY2006; up to \$150 million authorized annually for FY2004 through FY2006

*FY2007 budget request:* \$0

*Established:* FY2001 in response to Executive Order 13134 (August 12, 1999)

*Developing and Promoting Biobased Products and Bioenergy,* through CCC’s general authority to conduct commodity programs; extended by the Farm Security and Rural Investment Act of 2002, §9010 (P.L. 101-171)

*Scheduled termination:* End of FY2006

*Description:* The Bioenergy Program reimburses ethanol and biodiesel producers for expanding their production capacity. Payments help defray the purchase cost of the additional commodities needed for that expansion. The amount of each payment is based on the change in production capacity, as well as the number of applicants selected for funding. Eligible commodities include grain and oilseed crops (e.g. barley, corn, soybeans), cellulosic crops (e.g. switchgrass, rice hulls), animal fats, agricultural byproducts, and oils.

*Qualified applicant:* Any ethanol or biodiesel producer who expands production capacity

*For more information:* [[http://www.fsa.usda.gov/daco/bio\\_daco.htm](http://www.fsa.usda.gov/daco/bio_daco.htm)]

## **Renewable Energy Systems and Energy Efficiency Improvements**

*Administered by:* Rural Business Cooperative Service

*Annual funding:* \$23 million for all projects through FY2006, including biofuels projects; reduced in FY2007

*FY2007 budget request:* \$10.2 million

*Established:* FY2003 by the Farm Security and Rural Investment Act of 2002, §9006 (P.L. 101-171); funding authorization for FY2007 reduced to \$3 million by §1301 of the Deficit Reduction Act of 2005 (P.L. 109-171)

*Scheduled termination:* End of FY2007

*Description:* This program provides grants, loans, and loan guarantees for the development of renewable energy projects and energy efficiency improvements. The construction of a biofuel plant could be an eligible project. Grants are limited to 25% of the costs of the project; loans are limited to 50% of the cost of the project.

*Qualified applicant:* Farmers, ranchers, and rural small businesses

*For more information:* [<http://www.rurdev.usda.gov>]

## **Value-Added Producer Grants Program (VAPG)**

*Administered by:* Rural Business Cooperative Service

*Annual funding:* \$20.5 million appropriated for FY2006 (up from \$15.5 million in FY2005); part of a \$40 million total annual authorization for several value-added programs

*FY2007 budget request:* \$20.3 million

*Established:* FY2001, expanded in FY2003 to include renewable energy projects by the Farm Security and Rural Investment Act of 2002, §6401 (P.L. 101-171); the Deficit Reduction Act of 2005, §1402 (P.L. 109-171), requires that all previously appropriated funds unobligated by October 1, 2006 be returned to the Treasury

*Scheduled termination:* End of FY2007

*Description:* VAPG provides grants to independent producers for the development of value-added agricultural activities, including biofuel production. The grants can be used for feasibility studies, the development of a business plan, or to acquire working capital to operate a value-added business. Grants are limited to \$500,000 per recipient.

*Qualified applicant:* Independent producer, producer group, cooperative, or a majority-controlled producer-based business venture

*For more information:* [<http://www.rurdev.usda.gov/rbs/coops/vadg.htm>]

## **Biorefinery Development Grants (Unfunded)**

*Administered by:* If funded, it would likely be administered by USDA's Rural Development Agency

*Annual funding:* \$0

*Established:* 2002 by the Farm Security and Rural Investment Act of 2002, §9003 (P.L. 101-171)

*Scheduled termination:* End of FY2007

*Description:* This program was established by the Farm Security and Rural Investment Act of 2002 (P.L. 101-171); however, no funding has been provided. If

funded, the program would provide grants for the development and construction of biorefineries, including those that produce biofuels.

*Qualified applicant:* Virtually any non-federal entity (including a national laboratory) or group of entities that plans to build a biorefinery

*For more information:* N/A

## **Business and Industry (B&I) Guaranteed Loans**

*Administered by:* Rural Business Cooperative Service

*Annual funding:* Approximately \$1 billion in loans are guaranteed annually

*Scheduled termination:* None

*Description:* This program provides guarantees for up to 90% of a loan made by a commercial lender. Loan proceeds may be used for working capital, machinery and equipment, buildings and real estate, and certain types of debt refinancing.

*Qualified applicant:* Virtually any legal entity.

*For more information:* [[http://www.rurdev.usda.gov/rbs/busp/b&i\\_gar.htm](http://www.rurdev.usda.gov/rbs/busp/b&i_gar.htm)]

## **Rural Business Enterprise Grants (RBEG)**

*Administered by:* Rural Business Cooperative Service

*Annual funding:* Approximately \$40 million in each of FY2005 and FY2006

*Scheduled termination:* None

*Description:* RBEG provides grants to finance and facilitate development of small and emerging private rural business enterprises. The grant is awarded to a third party to assist a business; grant funds do not go directly to the business.

*Qualified applicant:* Public bodies, private nonprofit corporations, and federally recognized Indian Tribal groups.

*For more information:* [<http://www.rurdev.usda.gov/rbs/busp/rbeg.htm>]

## **Other USDA Programs**

The following programs within the Rural Business Cooperative Service could possibly be used to assist biofuels producers indirectly:

- Rural Economic Development Loan Program;
- Rural Development Loan Program;
- Rural Economic Development Grants.

## **Department of Energy (DOE)**

### **Biomass Research and Development Initiative**

*Administered by:* National Biomass Coordination Office (a joint DOE-USDA program)

*Annual funding:* \$14 million per year, decreased to \$12 million in FY2006

*FY2007 budget request:* \$12 million

*Established:* FY2001 by the Biomass Research and Development Act of 2000, §307 (P.L. 106-224); program extended and mandatory appropriations provided by the



Farm Security and Rural Investment Act of 2002, §9008 (P.L. 101-171); program extended and funding authorization expanded by the Energy Policy Act of 2005, §941 (P.L. 109-58) — currently authorized at \$200 million per year

*Scheduled termination:* End of FY2015

*Description:* Grants are provided for biomass research, development, and demonstration projects. Eligible projects include ethanol and biodiesel demonstration plants.

*Qualified applicant:* Wide range of possible applicants

*For more information:* [<http://www.biomass.govtools.us/>]

## **Biorefinery Project Grants**

*Administered by:* Office of Energy Efficiency and Renewable Energy

*Annual funding:* For FY2006 \$91 million appropriated for the biomass program — not all of this funding will go toward biorefinery project grants

*FY2007 budget request:* \$150 million for entire biomass program

*Established:* FY2001 through funding authorized in various statutes

*Scheduled termination:* None

*Description:* This program provides funds for cooperative biomass research and development for the production of fuels, electric power, chemicals, and other products.

*Qualified applicant:* Varies from year to year, depending on program goals in a given year

*For more information:* [<http://www.eere.energy.gov/biomass/>]

## **Loan Guarantees for Ethanol and Commercial Byproducts from Cellulose, Municipal Solid Waste, and Sugar Cane**

*Administered by:* DOE

*Annual funding:* Not specified

*FY2007 budget request:* \$0

*Established:* 2005 by the Energy Policy Act of 2005, §§1510, 1511, and 1516 (P.L. 109-58, H.R. 6)

*Scheduled termination:* Varies, depending on specific program

*Description:* The Energy Policy Act of 2005 authorizes several programs to provide loan guarantees for the construction of facilities that produce ethanol and other commercial products from cellulosic material, municipal solid waste, or sugar cane.

*Qualified applicant:* Private lending institutions, to guarantee loans for the construction of biofuels plants

## **U.S. Customs and Border Protection**

### **Import Duty for Fuel Ethanol**

*Administered by:* U.S. Customs and Border Protection

*Annual funding:* N/A

*Established:* 1980 by the Omnibus Reconciliation Act of 1980 (P.L. 96-499); amended by the Tax Reform Act of 1986, §423 (P.L. 99-514).

*Scheduled termination:* End of FY2007

*Description:* A 2.5% ad valorem tariff and a most-favored-nation duty of 54 cents per gallon of ethanol (for fuel use) applies to imports into the United States from most countries; most ethanol from Caribbean Basin Initiative (CBI) countries may be imported duty-free.

*Covered Entities:* Fuel ethanol importers

*For more information:* CRS Report RS21930, *Ethanol Imports and the Caribbean Basin Initiative*, by Brent D. Yacobucci.

## Appendix. Summary of Federal Incentives Promoting for Biofuels

Administering Agency	Program	Description	Original Authorizing Legislation	FY2006 Funding	Expiration Date
Environmental Protection Agency	Renewable Fuels Standard	Mandated use of renewable fuel in gasoline: 4.0 billion gallons in 2006, increasing to 7.5 billion gallons in 2012	P.L. 109-58 §1501	N/A	None
Internal Revenue Service	Volumetric Ethanol Excise Tax Credit	Gasoline suppliers who blend ethanol with gasoline are eligible for a tax credit of 51 cents per gallon of ethanol	P.L. 108-357 §301	N/A	End of 2010
	Small Ethanol Producer Credit	An ethanol producer with less than 60 million gallons per year in production capacity may claim a credit of 10 cents per gallon on the first 15 million gallons produced in a year	P.L. 101-508	N/A	End of 2007
	Biodiesel Tax Credit	Producers of biodiesel or diesel/biodiesel blends may claim a tax credit of \$1.00 per gallon of agri-biodiesel (produced from virgin agricultural products) or 50 cents per gallon of biodiesel from recycled products	P.L. 108-357	N/A	End of 2008
	Small Agri-Biodiesel Producer Credit	An agri-biodiesel producer (see above) with less than 60 million gallons per year in production capacity may claim a credit of 10 cents per gallon on the first 15 million gallons produced in a year	P.L. 109-58	N/A	End of 2008

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Administering Agency	Program	Description	Original Authorizing Legislation	FY2006 Funding	Expiration Date
Department of Agriculture	Bioenergy Program	Reimburses ethanol and biodiesel producers for feedstocks necessary to expand operations	P.L. 101-171 §9010	\$60 million	End of FY2006
	Renewable Energy Systems and Energy Efficiency Improvements	Grants, loans, and loan guarantees for the development of renewable energy projects and energy efficiency improvements	P.L. 101-171 §9006	\$23 million	End of FY2007
	Value-Added Producer Grants	Grants to independent producers for the development of value-added agricultural activities, including biofuel production	P.L. 101-171 §6401	\$20.5 million	End of FY2007
	Biorefinery Development Grants - Unfunded	If funded, would provide grants for the development and construction of biorefineries, including biofuel plants	P.L. 101-171 §9003	\$0	End of FY2007
	Business and Industry (B&I) Guaranteed Loans	Loan guarantees for various projects — could be used for biofuels	Various statutes	Approx. \$1 billion	None
	Rural Business Enterprise Grants	Grants to finance and facilitate development of small and emerging rural business enterprises	Various statutes	Approx. \$40 million	None

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Administering Agency	Program	Description	Original Authorizing Legislation	FY2006 Funding	Expiration Date
Department of Energy	Biomass Research and Development Initiative	Grants for biomass research, development, and demonstration projects	P.L. 106-224	\$12 million	End of FY2015
	Biorefinery Project Grants	Funds cooperative R&D on biomass for fuels, power, chemicals, and other products	Various statutes	\$91 million	None
	Loan Guarantees for Ethanol and Commercial Byproducts from Various Feedstocks	Several programs of loan guarantees to construct facilities that produce ethanol and other commercial products from cellulosic material, municipal solid waste, and/or sugarcane	P.L. 109-58 §§1510, 1511, and 1516	N/A	Varies
U.S. Customs and Border Protection	Import Duty for Fuel Ethanol	All imported ethanol is subject to a 2.5% ad valorem tariff; fuel ethanol is also subject to a most-favored-nation added duty of 54 cents per gallon (with some exceptions)	P.L. 96-499	N/A	End of FY2007