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Overview of Bioenergy Programs in the 2018 Farm Bill

Congress has long encouraged the production of renewable energy and products derived from agriculture-based feedstock in pursuit of various policy goals. These goals include U.S. energy security, greenhouse gas emission reduction, and increased demand for U.S. farm products. Since the late 1970s, Congress has employed a wide range of policy mechanisms and incentives—including the farm bill—to expand the production and use of agriculture-based renewable energy (e.g., tax incentives to blend biofuels with gasoline, loan guarantees to construct production facilities, and a consumption mandate for biofuels).

The multiple energy programs authorized and funded in the 2018 farm bill build upon programs established in the 2002 farm bill—the first farm bill with an energy title authorizing several agriculture-based bioenergy programs (7 U.S.C. 8101 et seq.). Since 2002, the energy title in succeeding farm bills mostly has reauthorized—and in some cases modified—bioenergy programs. For instance, with a few exceptions, Title IX of the 2018 farm bill (P.L. 115-334) reauthorized the major bioenergy programs from the 2014 farm bill (P.L. 113-79), while providing many of them with mandatory funding (i.e., not dependent on annual appropriations) for the five-year life of the bill, FY2019-FY2023. The mandatory funding for bioenergy programs provided in the 2018 farm bill is less than what was provided in the 2014 farm bill. The 2018 farm bill repeals one program and one initiative—the Repowering Assistance Program and the Rural Energy Self-Sufficiency Initiative. Also, the 2018 farm bill establishes a new program for carbon utilization and biogas education. Because the farm bill provides mandatory funding *and* authorizes discretionary funding for many of the energy title programs, there is typically an annual discussion about how much discretionary funding should be appropriated.

A brief description of the farm bill bioenergy programs follows. **Table 1** identifies the implementing agency by program and provides authorized funding levels.

Biobased Markets Program. Referred to as the BioPreferred Program at the U.S. Department of Agriculture (USDA). Promotes biobased products through two initiatives: (1) mandatory purchasing for federal agencies and their contractors and (2) a voluntary labeling initiative for biobased products. Products that meet the minimum biobased content criteria may display the USDA Certified Biobased Product label.

Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program. Seeks to facilitate the development of new and emerging technologies for advanced biofuels; renewable chemicals; and biobased product manufacturing by providing loan guarantees for constructing or retrofitting commercial-scale biorefineries.

Bioenergy Program for Advanced Biofuels. Provides payments to producers to support and expand advanced biofuels (i.e., not derived from corn starch). One payment type is based on advanced biofuel production, and a second is for production increases. No more than 5% of available funds provided each year may be used for facilities that exceed an annual capacity of 150 million gallons.

Biodiesel Fuel Education Program. Provides grants to nonprofit organizations and institutions of higher education that educate government and private entities that operate fleet vehicles; the public; and others about the benefits of biodiesel.

Rural Energy for America Program (REAP). Provides eligible entities (e.g., state, tribal, or local governments; land-grant colleges and universities; rural electric cooperatives; and public power entities) with grants for conducting energy audits and conducting renewable energy development assistance. Also provides financial assistance (i.e., loan guarantees and grants) for energy efficiency improvement projects and renewable energy systems (RESs). RESs include biofuels, and power generation from wind, solar, biomass, geothermal, ocean, and some hydropower sources. RESs exclude retail energy dispensers (e.g., blender pumps). A cap of 15% of available funds per year is imposed on loan guarantees to agricultural producers for energy efficiency equipment.

Rural Energy Savings Program (RESP). Provides loans to rural families and small businesses to achieve cost savings to implement durable cost-effective energy efficiency measures to include on- or off-grid renewable energy or energy storage systems.

Biomass Research and Development Initiative (BRDI). Offers competitive funding through grants, contracts, and financial assistance for research, development, and demonstration of technologies and processes for biofuels and biobased products. Eligibility is limited to institutions of higher learning, national laboratories, federal or state research agencies, and private and nonprofit entities.

Feedstock Flexibility Program (FFP). Designed to help stabilize sugar prices so as to avoid costly forfeitures under the sugar loan program. Under FFP, USDA's Commodity Credit Corporation (CCC) may purchase sugar from processors for resale to fuel ethanol producers.

Biomass Crop Assistance Program (BCAP). Makes payments to owners and operators of agricultural land and nonindustrial private forest land for establishing, producing, and delivering biomass feedstock to eligible processing plants. Payments include (1) within BCAP project areas, establishment payments for perennial crops and annual payments of up to five years for non-woody crops and 15 years for woody biomass crops; and (2) matching payments for up to two years for crop collection, harvest, storage, and transportation of qualified biomass (regardless of location).

Community Wood Energy and Wood Innovation

Program. Provides matching grants for the installation of community wood energy systems or building an innovative wood product facility. Grants are capped at 35% of the capital cost.

Sun Grant Program. Provides grants to regional centers to be used for integrated, multistate research, extension, and education programs on technology development and technology implementation and to address bioenergy, biomass, or bioproducts research priorities.

Carbon Utilization and Biogas Education Program.

Provides competitive grants to eligible entities to (1) educate the public about the economic benefits and emissions benefits of permanent carbon sequestration and utilization and (2) educate agricultural producers and other stakeholders about opportunities for the collection of organic waste from multiple sources to be used in a single biogas system.

Table 1. 2018 Farm Bill Energy Programs: FY2019 Authorized Funding

Title IX Energy Program Name	Implementing Agency	U.S. Code Citation	FY2019 Mandatory Funding (M) and Authorization of Discretionary Appropriations (D) (millions of dollars)	FY2019 Appropriations (millions of dollars)
Biobased Markets Program (i.e., BioPreferred Program)	USDA RD	7 U.S.C. 8102	M - \$3 D - \$3	M - \$3 D - \$0
Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program	USDA RD	7 U.S.C. 8103	M - \$50 D - \$75	M - \$50 D - \$0
Bioenergy Program for Advanced Biofuels	USDA RD	7 U.S.C. 8105	M - \$7 D - \$20	M - \$7 D - \$0
Biodiesel Fuel Education Program	USDA NIFA and USDA OEPNU	7 U.S.C. 8106	M - \$0 D - \$2	M - \$0 D - \$0
Rural Energy for America Program	USDA RD	7 U.S.C. 8107	M - \$50 D - \$20	M - \$50 D - \$0.335
Rural Energy Savings Program	USDA RD	7 U.S.C. 8107a	M - \$0 D - \$75	M - \$0 D - \$10
Biomass Research and Development Initiative	USDA NIFA and DOE	7 U.S.C. 8108	M - \$0 D - \$20	M - \$0 D - \$0
Feedstock Flexibility Program	USDA FSA	7 U.S.C. 8110	M - SSAN D - \$0	M - SSAN D - \$0
Biomass Crop Assistance Program	USDA FSA	7 U.S.C. 8111	M - \$0 D - \$25	M - \$0 D - \$0
Community Wood Energy and Wood Innovation Program	USDA FS	7 U.S.C. 8113	M - \$0 D - \$25	M - \$0 D - \$0
Sun Grant Program	USDA NIFA	7 U.S.C. 8114	M - \$0 D - \$75	M - \$0 D - \$3
Carbon Utilization and Biogas Education Program	TBD	TBD	M - \$0 D - \$2	M - \$0 D - \$0

Source: P.L. 115-334, H.Rept. 116-9, P.L. 116-6, appropriation committee reports, and CRS publications.

Notes: D=discretionary funding; FS=Forest Service; FSA=Farm Service Agency; M=mandatory funding; NIFA=National Institute of Food and Agriculture; OEPNU=Office of Energy Policy and New Uses; RD=Rural Development; SSAN=such sums as necessary; TBD=To be determined. The mandatory funding is subject to sequestration, which is unspecified in the table.