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IN FOCUS

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Farm Bill Primer: Energy Title

Omnibus farm bills have been enacted periodically to address agricultural and food programs. The most recent farm bill—the Agriculture Improvement Act of 2018 (P.L. 115-334; 2018 farm bill)—contains 12 titles, including Title IX Energy. The 2018 farm bill is the fourth farm bill to contain an energy title. In preparation for another farm bill, Congress may examine funding and oversight of the energy title programs as well as (1) the effect of related efforts provided under non-agriculture legislation (e.g., the Renewable Fuel Standard (RFS)), (2) market activity for conventional energy (e.g., the price of oil), and (3) support provided under the Inflation Reduction Act of 2022 (IRA; P.L. 117-169).

This *In Focus* summarizes the 2018 farm bill energy title, energy title funding for the last four farm bills, legislative support for agriculture-related energy, and legislative issues as background and context for upcoming discussions about authorizing another farm bill. This *In Focus* reviews all sections of 7 U.S.C. Ch. 107 Renewable Energy Research and Development, including sections enacted under other titles of the 2018 farm bill.

2018 Farm Bill Energy Title

The 2018 farm bill energy title primarily focuses on support for renewable energy—particularly agriculture-related energy—as well as energy efficiency and bioproducts (e.g., bio-based cleaning supplies). The 2018 farm bill authorizes 12 energy programs and initiatives. This total includes reauthorization of 11 activities and establishment of one new program—the Carbon Utilization and Biogas Education Program. Further, the law repeals one program and one initiative—the Repowering Assistance Program and the Rural Energy Self-Sufficiency Initiative, respectively. The 12 authorized programs and initiative are

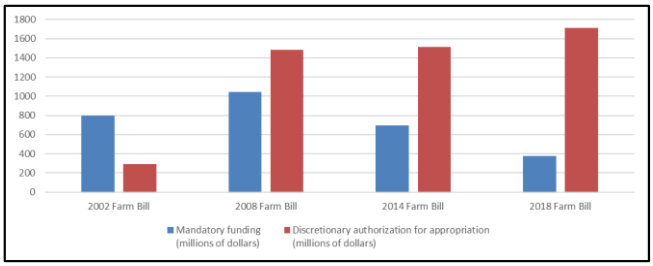
- 7 U.S.C. §8102: Biobased Markets Program;
- 7 U.S.C. §8103: Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance (Program);
- 7 U.S.C. §8105: Bioenergy Program for Advanced Biofuels;
- 7 U.S.C. §8106: Biodiesel Fuel Education Program;
- 7 U.S.C. §8107: Rural Energy for America Program (REAP);
- 7 U.S.C. §8107a: Rural Energy Savings Program;
- 7 U.S.C. §8108: Biomass Research and Development (Initiative);
- 7 U.S.C. §8110: Feedstock Flexibility Program for Bioenergy Producers;
- 7 U.S.C. §8111: Biomass Crop Assistance Program;
- 7 U.S.C. §8113: Community Wood Energy and Wood Innovation Program;
- 7 U.S.C. §8114: Sun Grant Program; and
- 7 U.S.C. §8115: Carbon Utilization and Biogas Education Program.

Of the 11 reauthorized activities, seven programs and one initiative were amended under the 2018 farm bill (§8102, §8103, §8105, §8107, §8107a, §8108, §8111, and §8113), and three programs generally were unchanged (§8106, §8110, and §8114). For more discussion of the energy title programs, see CRS In Focus IF10288, *Overview of the 2018 Farm Bill Energy Title Programs*, by Kelsi Bracmort.

Energy Title Funding

Like previous bills, the 2018 farm bill addresses funding for Title IX programs. The five-year FY2019-FY2023 total mandatory funding and the total discretionary funding authorized to be appropriated are $375 million and $1.7 billion, respectively (see **Figure 1**). The mandatory funding for the energy title comprises approximately 0.1% of the Congressional Budget Office's 2018 farm bill total mandatory program estimate of $428 billion over the same five-year period.

Figure 1. Energy Title Funding in 2002-2018 Farm Bills
(in millions of dollars)



Source: CRS Report R45943, *The Farm Bill Energy Title: An Overview and Funding History*, by Kelsi Bracmort

Notes: Mandatory funding for the 2002 farm bill covered a six-year period, whereas the other farm bills covered a five-year period.

Mandatory funding for the energy title has varied in each bill—with the largest amount, approximately $1 billion over five years, provided in the 2008 farm bill (P.L. 110-246). Mandatory funding has declined in each farm bill since. Under the 2018 farm bill, five programs receive mandatory funding, fewer than before. The §8103 and §8107 programs combined constitute close to 87% of the total mandatory funding in Title IX.

Discretionary funding increased over the last three farm bills. Under the 2018 farm bill, discretionary funding is authorized for all but one of the energy title programs—the §8110 program. For those programs that may receive both mandatory and discretionary funding, the discretionary funding amount authorized is almost equivalent to or

exceeds the mandatory funding amount. However, thus far, total discretionary funding under the 2018 farm bill has been lower than the amounts authorized to be appropriated. Four programs have received discretionary funding under the 2018 farm bill: §8107, §8107a, §8113, and §8114.

Agriculture-Related Energy

Agriculture-related energy is defined, for the purposes herein, as energy derived from agricultural or forestry feedstocks (e.g., crops, woody biomass, food waste, manure). Agriculture-related energy—commonly named *bioenergy*—may be in the form of liquid transportation fuels, electric power, or heat. The most prevalent form is ethanol—a liquid fuel commonly blended with gasoline for use in motor vehicles.

There are opportunities and challenges associated with bioenergy production. Bioenergy often is viewed as renewable and as having fewer detrimental environmental effects than conventional energy. Disagreement exists about the environmental effect of certain types of bioenergy (e.g., greenhouse gas emission impacts of cornstarch ethanol, land-use changes, water quality impacts). Some view bioenergy as having the potential to stimulate economic development in rural areas. However, there can be limitations—primarily infrastructure and economic—to the production, distribution, and consumption of bioenergy.

Legislative Support for Agriculture-Related Energy

Congress has supported agriculture-related energy for close to 40 years through energy, agriculture, and tax laws. One of Congress's initial measures to support agriculture-related energy was the Energy Security Act of 1980 (P.L. 96-294). This act established a biomass energy program, including an Office of Alcohol Fuels within the Department of Energy, a municipal waste biomass energy program, and several initiatives for forestry energy. Congress created an energy title in the 2002 farm bill (P.L. 107-171), which assisted farmers with purchasing renewable energy systems and increasing energy efficiency. This agricultural legislation was followed by the Energy Policy Act of 2005 (P.L. 109-58), which established the RFS that mandates U.S. transportation fuel contain a minimum volume of biofuel, and by the Energy Independence and Security Act of 2007 (P.L. 110-140), which expanded the mandate. Congress then passed the 2008 farm bill—which renewed authorization for and expanded renewable energy programs established in the 2002 farm bill. Congress subsequently passed the 2014 farm bill (P.L. 113-79), which extended most of the renewable energy provisions of the 2008 farm bill. Congress then passed the 2018 farm bill that extended most of the 2014 renewable energy provisions.

Congress established tax incentives for biofuels, including the Volumetric Ethanol Excise Tax Credit (which expired in 2011) and the Biodiesel Tax Credit in the American Jobs Creation Act of 2004 (P.L. 108-357). The Inflation Reduction Act of 2022 (IRA, P.L. 117-169) extends certain tax incentives for biofuels, including for biodiesel and renewable diesel, through 2024. The law also establishes a new sustainable aviation fuel tax credit that would, after 2024, be absorbed into a new clean fuel production tax credit, available through 2027.

Legislative Issues

With the enacted 2018 farm bill, and as Congress prepares for another farm bill, Congress may assess agriculture-related energy in at least three domains—agriculture, the environment, and economic development. Potential issues for Congress include (1) the amount (if any) of discretionary funding to provide in annual appropriation laws for 2018 farm bill energy title programs, (2) the impact of the financial support provided by the IRA on energy title programs, and (3) what if any impact the energy title programs have on other legislative efforts (e.g., the RFS, fuel tax incentives).

There are a few points specific to the energy title programs that Congress may consider when addressing the three aforementioned issues. First, with the exception of REAP, many of the energy title programs lack a budget baseline—a projection at a particular point in time of what future federal spending on mandatory programs would be under current law. Thus, a re-authorization of some of the energy title programs in the 2018 farm bill could be scored as new mandatory spending and may require budgetary offsets to pay for it (e.g., in a future farm bill).

Second, in the past, there has been minimal discretionary funding provided for energy title programs. Going forward, some may assert that Congress does not need to provide discretionary funding because some of the energy title programs receive mandatory funding. Others may contend that the programs cannot be fully effective if Congress does not appropriate the discretionary funding.

Third, the relationship between other policy mechanisms (e.g., consumption mandates, tax incentives) and the energy title programs remains an issue. The focus of the agriculture-related energy discussion has centered on liquid transportation fuels (i.e., cornstarch ethanol, cellulosic ethanol). Energy policy and tax policy have maintained this focus with the RFS and certain tax credits (e.g., biodiesel tax incentive). Congress may debate whether continued support for liquid transportation fuels is necessary via non-agriculture legislation and relative to the development of electric vehicles.

Lastly, supplies of domestic oil and natural gas, along with both energy and agricultural commodity prices, are a consideration when discussing the energy title programs. The energy title programs were established and expanded when high energy prices and energy independence were concerns. Given current economic conditions (e.g., the COVID-19 pandemic, the invasion of Ukraine), it is not clear how agriculture-related energy will compare with oil and natural gas prices.

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