Order Code RL34130

# CRS Report for Congress

## Renewable Energy Policy in the 2007 Farm Bill

**Updated January 10, 2008**

Randy Schnepf and Tom Capehart
Specialists in Agricultural Policy
Resources, Science, and Industry Division

Prepared for Members and
Committees of Congress

Congressional
Research
Service

# Renewable Energy Policy in the 2007 Farm Bill

## Summary

On July 27, 2007, the House passed a farm bill, the Farm, Nutrition, and Bioenergy Act of 2007 (H.R. 2419). On December 14, 2007, the Senate approved its version of the 2007 farm bill (Senate substitute amendment to H.R. 2419), but with substantial amendments. A House-Senate conference will work to resolve the major differences between the two chambers' bills in early 2008. This report provides a summary of the energy provisions in these two bills and compares them with current law.

Renewable energy's role in the 2002 farm bill is contained in Title IX — the energy title — and concentrates on grants, loans, and loan guarantees to foster research on agriculture-based renewable energy, to share development risk, and to promote the adoption of renewable energy systems. USDA's Bioenergy Program (Sec. 9006 of P.L. 107-171), whose funding expired in FY2006, has been the primary exception in that it provided incentives to expand actual production of bioenergy. Both the House- and Senate-passed farm bills retain Title IX as the energy title, but expand and extend several energy provisions from the 2002 farm bill with substantial increases in funding and a heightened focus on developing cellulosic ethanol production. The Senate-passed farm bill also includes an additional title — Title XII — which contains tax provisions affecting renewable energy. Both bills establish a new program — the Bioenergy Reserve Program in the House version and the Biomass Crop Transition Assistance Program in the Senate — with mandatory funding to stimulate and facilitate the production, harvest, storage, and processing of cellulosic biomass feedstock. In addition, both bills include several new studies, research and demonstration projects, and pilot programs targeted to specific issues within the renewable energy purview that would be subject to annual appropriations.

Funding levels for the provisions of the energy title vary under the two farm bills. In addition, the Senate farm bill includes production incentives that extend (and enlarge in the case of cellulosic ethanol) current biofuels production tax credits. Such differences in new energy funding, as well as differences in budgetary revenue and cost offsets related to "pay-go" budget restrictions, will likely have to be resolved in conference. For more information this and other farm bill issues, see CRS Report RL33934, *Farm Bill Proposals and Legislative Action in the 110th Congress*.

In addition to forthcoming farm bill action, the President has recently signed into law a new energy act (P.L. 110-140; December 19, 2007) that covers a wide range of topics with extensive attention to biofuels and other renewable energy sources. In particular, it includes a dramatic expansion of the Renewable Fuels Mandate to 36 billion gallons by 2022 with carve-outs for biodiesel (1 billion gallons by 2012) and cellulosic ethanol (16 billion gallons by 2022) and an implicit cap on corn-starch ethanol (15 billion gallons by 2015). For more information on these energy bills and their relation to the farm bills, see CRS Report RL34239, *Biofuels in 2007 Energy and Farm Bills: A Side-by-Side Comparison*.

This report will be updated as events warrant.

## Contents

Introduction . . . . . 1
House Farm Bill Action . . . . . 2
H.R. 2419 Approved . . . . . 2
House Energy Funding Issues . . . . . 2
Senate Farm Bill Action . . . . . 3
Senate Substitute Amendment to H.R. 2419 Approved with Further Amendments . . . . . 3
Senate Energy Funding Issues . . . . . 3
Comparison of House and Senate Farm Bill Energy Provisions . . . . . 4
Related Congressional Energy Bill Action . . . . . 4
The Administration's Farm Bill Energy Proposals . . . . . 5

## List of Tables

Table 1. 2002 Farm Bill Title IX Energy Funding (Presidential Request, Authorization, and Enactment) by Provision, FY2002 to FY2007 . . . . . 6
Table 2. House Farm Bill (H.R. 2419): Proposed Funding for Title IX Energy Provisions, FY2008-FY2012 . . . . . 7
Table 3. Senate Farm Bill (H.R. 2419 with amendments): Proposed Funding for Title IX Energy Provisions, FY2008-FY2012 . . . . . 9
Table 4. Comparison of Current Law with the House-Passed 2007 Farm Bill (H.R. 2419; July 27, 2007) and the Senate-Passed 2007 Farm Bill (H.R. 2419 with amendments; December 14, 2007) . . . . . 11

# Renewable Energy Policy in the 2007 Farm Bill

## Introduction

The 2002 farm bill — the Farm Security and Rural Investment Act of 2002 (P.L. 107-171) — was the first farm bill to explicitly include an energy title (Title IX). Title IX's role in the 2002 farm bill was concentrated on grants, loan, and loan guarantees to foster research on agriculture-based renewable energy, to share development risk, and to promote the adoption of renewable energy systems.[1] In addition, USDA's Bioenergy Program (Sec. 9006 of P.L. 107-171) — whose funding expired in FY2006 — provided direct incentives to expand actual production of bioenergy. **Table 1** provides a list of current-law energy provisions and their funding (as requested by the President, and as authorized and enacted by Congress) derived from the 2002 farm bill's energy title for FY2002 through FY2007.

Since enactment of the 2002 farm bill, interest in renewable energy has grown rapidly due, in large part, to a strong rise in domestic and international fuel prices and a dramatic acceleration in domestic biofuel production (mostly ethanol).[2] Many policymakers view agriculture-based biofuels as both a catalyst for rural economic development and a response to growing energy import dependence. 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.[3] However, emerging concerns related to corn-based ethanol production are generating greater policy interest in the potential for cellulosic ethanol production which appears to offer many environmental benefits over corn-based ethanol.[4]

Renewable energy policy initiatives have been included in almost every 2007 farm bill proposal in both the House and Senate. In most cases, legislative proposals involved expanding and/or extending bioenergy provisions from the 2002 farm bill. Strong congressional interest in maintaining, if not expanding, agriculture's role in

---

[1] For more information see CRS Report RL32712, *Agriculture-Based Renewable Energy*. For details of current law, see USDA, *2002 Farm Bill*, "Title IX — Energy," available at [http://www.ers.usda.gov/Features/Farmbill/titles/titleIXenergy.htm].

[2] For more information on agriculture and bioenergy, see CRS Report RL32712, *Agriculture-Based Renewable Energy Production*; and CRS Report RL33290, *Fuel Ethanol: Background and Public Policy Issues*, by Brent Yacobucci.

[3] For a listing of federal incentives in support of biofuels production, see CRS Report RL33572, *Biofuels Incentives: A Summary of Federal Programs* by Brent D. Yacobucci.

[4] For more information see CRS Report RL33928, *Ethanol and Biofuels: Agriculture, Infrastructure, and Market Constraints Related to Expanded Production* by Brent Yacobucci and Randy Schnepf.

renewable energy production was signaled early in the farm bill congressional debate, when both Chairman Collin Peterson of the House Agriculture Committee and Senator Ken Salazar (a member of the Senate Agriculture Committee) introduced resolutions in January 2007 that "express the sense of Congress" that U.S. agricultural, forestry, and working lands should provide from renewable resources 25% of the total U.S. energy consumption by 2025 (H.Con.Res. 25/S.Con.Res. 3).[5]

## House Farm Bill Action

**H.R. 2419 Approved.** On July 27, 2007, the House approved a new farm bill — the Farm, Nutrition, and Bioenergy Act of 2007 (H.R. 2419) — which includes a new energy title (Title IX). The House-passed H.R. 2419 expands and extends several provisions from the energy title of the enacted 2002 farm bill with substantial increases in funding and a heightened focus on developing cellulosic ethanol production. The House bill authorizes $3.2 billion in new mandatory funding and over $1.4 billion in new discretionary spending (i.e., spending subject to annual appropriations) for Title IX energy provisions over five years. In particular, H.R. 2419 proposes $1.4 billion in production incentive payments on new biofuels production under an extension of the USDA Bioenergy Program; $800 million in new funding to underwrite up to $2 billion in loan guarantees for the development of new biorefineries; $420 million in new funding for research on biomass production, harvest, transportation, and storage under the Biomass Research and Development Act ; and new mandatory funding for a biomass reserve for cellulosic feedstock under the Biomass Energy Reserve Program. See **Table 2** for a complete listing of energy provisions in H.R. 2419, including proposed mandatory and discretionary funding for FY2008 through FY2012.

**House Energy Funding Issues.** Because all mandatory funding authority under the energy title of the 2002 farm bill expires either on or before the end of fiscal 2007, CBO budget scoring showed no funding in the baseline budget for an energy title under new farm legislation.[6] Under current budget law, this posed "pay-go" budget issues, since any new initiatives with new spending would have to be offset with either increased revenue or reductions in other spending.[7] To address this issue, the House Agriculture Committee (HAC) turned to the House Ways and Means Committee (HWMC). In turn, the HWMC was able to find several revenue offsets from outside of the agriculture budget.[8] CBO estimates that these provisions would

---

[5] H.Con.Res. 25 was approved by the House on October 15, 2007. S.Con.Res. 3 was referred to the Senate Agriculture Committee on January 17, 2007. No action has been taken on S.Con.Res. 3 to date.

[6] Congressional Budget Office, March 2007 Baseline Budget. For more information, see CRS Report RS22694, *Farm Bill Budget and Costs: 2002 vs. 2007* by Ralph Chite.

[7] For more information see CRS Report RL33850, *The House's 'Pay-As-You-Go' (PAYGO) Rule in the 110th Congress: A Brief Overview* by Robert Keith.

[8] For more information, see CRS Report RS22759, *Farm Legislation and Taxes in 2007*, by David Brumbaugh.

produce total offsets of $2.2 billion over five years.[9] The HWMC budget offsets were passed as part of H.R. 2419.

## Senate Farm Bill Action

**Senate Substitute Amendment to H.R. 2419 Approved with Further Amendments.** The Senate approved its version of a 2007 farm bill (Senate substitute amendment to H.R. 2419) on December 14, 2007. The Senate-approved farm bill also includes a new energy title (Title IX) that expands and extends several provisions from the energy title of the enacted 2002 farm bill similar to the House-passed H.R. 2419, but with different funding levels and priorities. The Senate bill authorizes $1.1 billion in new mandatory funding and over $2 billion in new discretionary spending. See **Table 3** for a complete listing of energy provisions in the Senate-approved farm bill, including proposed mandatory and discretionary funding for FY2008 through FY2012.

**Senate Energy Funding Issues.** As in the House, the Senate is expected to adhere to "pay-go" budget restrictions. However, Senate Agriculture Committee (SAC) members expressed general disagreement with the budget offsets proposed by the House Ways and Means Committee to free up funds for new energy provisions. Instead, the SAC turned to the Senate Finance Committee (SFC) for assistance in finding alternate budget offsets to allow for new energy funding. SFC Chairman Baucus proposed a tax package that provides incentives for conservation, alternative energy production, rural development, and to create a permanent disaster relief fund.[10] The tax package was approved by the SFC on October 4, 2007, and reported out as S. 2242. The SFC tax package was appended to Senate Agriculture Committee's manager's amendment as Title XII, "Trade and Tax Provisions," and included in the final Senate-passed farm bill with only minor modifications.

Renewable energy-related provisions in the newly appended Title XII include several provisions related to biofuel production tax credits (PTCs) presently available to blenders of biofuels. For example, Title XII extends for two years both the current biodiesel PTCs (through December 31, 2010) and the small ethanol PTC (through December 31, 2012). It also expands the PTC for cellulosic ethanol production to $1.25 per gallon (compared with the current non-cellulosic ethanol PTC of $0.51 per gallon). In contrast, among Title XII's proposed offsets is a reduction in the ethanol PTC from $0.51 per gallon to $0.46 per gallon beginning with the first calendar year after the year in which 7.5 billion gallons of ethanol has been produced. CBO projects that the PTC reduction of $0.05/gallon will save nearly $0.9 billion during FY2008-FY2012. Title XII also extends the tariff on imported ethanol for two years (through December 31, 2010).

---

[9] For more information, see *Congressional Quarterly*, "The Farm Bill," Floor Summary, No. 110-14, July 31, 2007.

[10] "Finance Chairman Outlines Agriculture Tax Package," Senate Finance Committee News Release, Sept. 11, 2007; [http://finance.senate.gov/press/Bpress/2007press/prb091107a.pdf].

## Comparison of House and Senate Farm Bill Energy Provisions

Both the House- and Senate-passed versions of the 2007 farm bill retain Title IX as the Energy title, but with modifications. (See **Table 4** for a side-by-side comparison of current law with the energy titles from the House- and Senate-approved farm bills.) Both bills retain and extend several energy provisions from the 2002 farm bill with mandatory funding include the federal biobased product preference program, the biorefinery development grant and loan guarantee program, the renewable energy systems and energy efficiency improvements program, the Biomass Research and Development Act, and the Biodiesel Fuel Education Program. Both bills establish a new program — the Bioenergy Reserve Program in the House version and the Biomass Crop Transition Assistance Program in the Senate — with mandatory funding to stimulate and facilitate the production, harvest, storage, and processing of cellulosic-based biomass feedstock. In addition, a variety of studies, research and demonstration projects, and pilot programs targeted to specific issues within the renewable energy purview that would be subject to annual appropriations are included in the two bills. Both bills also add new funding and extend the USDA bioenergy program. However, in a key departure from current farm bill, all new bioenergy funding is directed away from corn starch-based ethanol production and toward either cellulosic-based biofuels production or new as-yet-undeveloped technologies with some type of agricultural linkage.

Funding levels and the sources of funding for the provisions of the energy title differ somewhat under the two farm bills. The House-passed version authorizes substantially more in new mandatory funding ($3.2 billion versus $1.1 billion) but less in discretionary funding ($1.4 billion versus $2 billion) for provisions of the energy title. In addition, substantial differences exist between the budget funding offsets proposed by the HWMC and the SFC. The funding of new or extended energy provisions hinges on the ultimate resolution of such differences in conference.

## Related Congressional Energy Bill Action

Many of the federal programs that currently support renewable energy production in general, and agriculture-based energy production in particular, are outside the purview of USDA and have legislative origins outside of the farm bill.[11] For example, the Renewable Fuels Standard mandating the inclusion of an increasing volume of biofuels in the national fuel supply originated with the Energy Policy Act of 2005 (P.L. 109-58). Similarly, the federal tax credits available to biofuels blenders and wind energy producers were most recently extended by the American Jobs Creation Act of 2004 (P.L. 108-357).

More recently, the President has signed into law a new energy act — the Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007 (P.L. 110-140; December 19, 2007) — that covers a wide range of topics with extensive

---

[11] For more information see CRS Report RL32712, *Agriculture-Based Renewable Energy*. For a complete listing of renewable energy legislative proposals introduced during the 110th Congress, see CRS Report RL33831, *Energy Efficiency and Renewable Energy Legislation in the 110th Congress*, by Fred Sissine, Anne Gillis, and Mark Gurevitz.

attention to biofuels and other renewable energy sources.[12] In particular, it includes a dramatic expansion of the Renewable Fuels Standard to 36 billion gallons by 2022 with carve-outs for biodiesel (1 billion gallons by 2012) and cellulosic ethanol (16 billion gallons by 2022) and an implicit cap on the inclusion of corn-starch ethanol (15 billion gallons by 2015). This RFS expansion is likely to have a significant impact on the U.S. agriculture sector.[13]

## The Administration's Farm Bill Energy Proposals

In late January 2007, the Administration released a comprehensive 2007 farm bill proposal for consideration in advance of the legislative debate.[14] Because of its early release, the USDA proposal likely provided a useful template for many of the provisions included in both the House and Senate farm bill proposals. In particular, Title IX of the Administration's farm bill proposal included $1.6 billion in new funding for basic and applied research on renewable energy as well as loan and loan guarantee programs to share the risk associated with developing and commercializing new energy technologies. As with both House and Senate farm bills, the primary focus of USDA's proposed funding is the development of cellulosic ethanol production including a biomass reserve for cellulosic feedstock and funding for Forest Service research on the use of woody biomass.

Despite many similarities between the President's farm bill proposal and both the House- and Senate-passed farm bills, the Administration has expressed its dissatisfaction with both bills, citing budget offset measures used to fund new programs, the need for tighter farm income subsidy limits, and an alleged general lack of reform from traditional commodity support programs. The Administration is calling for substantial changes in the farm bill to come out of conference in order to avoid a presidential veto.[15]

---

[12] For more information, see CRS Report RL34294, *Energy Independence and Security Act of 2007: A Summary of Major Provisions*, coordinated by Fred Sissine.

[13] For more information, see CRS Report RL34265, *Seclected Issues Related to an Expansion of the Renewable Fuel Standard (RFS)*, by Brent Yacobucci and Randy Schnepf.

[14] USDA's 2007 farm bill proposal is available online at [http://www.usda.gov/wps/portal/!ut/p/_s.7_0_A/7_0_1UH?navid=FARM_BILL_FORUMS].

[15] For more information see, "Transcript of Remarks by Acting Agriculture Secretary Chuck Conner at a Tele-News Conference Regarding the Passage of the Senate Farm Bill, USDA News Release No. 0376.07, Washington, DC, December 14, 2007.

## Table 1. 2002 Farm Bill Title IX Energy Funding (Presidential Request, Authorization, and Enactment) by Provision, FY2002 to FY2007

| Current law provision | FY2002 | | | FY2003 | | | FY2004 | | | FY2005 | | | FY2006 | | | FY2007[d] | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pres. Req. | Auth. | Enact.[a] | Pres. Req. | Auth. | Enact.[a] | Pres. Req. | Auth. | Enact.[a] | Pres. Req. | Auth. | Enact.[a] | Pres. Req. | Auth. | Enact.[a] | Pres. Req. | Auth. | Enact.[a] |
| | $ millions | | | $ millions | | | $ millions | | | $ millions | | | $ millions | | | $ millions | | |
| Sec. 9002 Federal Biobased Product Procurement | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| Sec. 9003* Biorefinery Development Grants | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 |
| Sec. 9004 Biodiesel Fuel Education Program | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| Sec. 9005* Energy Audit and Renewable Energy Program | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 |
| Sec. 9006 Renewable Energy Systems [b] | 23 | 23 | 23 | 18 | 23 | 23 | 3 | 23 | 23 | 11 | 23 | 23 | 10 | 23 | 23 | 10 | 23 | 0 |
| Sec. 9007* Hydrogen and Fuel Cell Technologies | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 | 0 | SSAN | 0 |
| Sec. 9008* Biomass Research and Development [c] | 5 | 54 | 5 | 14 | 63 | 14 | 14 | 63 | 14 | 14 | 63 | 14 | 12 | 214 | 12 | 12 | 214 | 0 |
| Sec. 9009 Cooperative Research and Extension Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sec. 9010* Continuation of Bioenergy Program | 0 | 0 | 0 | 150 | 150 | 116 | 150 | 150 | 150 | 100 | 150 | 100 | 60 | 150 | 60 | 0 | 0 | 0 |
| **Total Energy Programs** | 30 | 79 | 30 | 184 | 238 | 155 | 169 | 238 | 189 | 127 | 238 | 139 | 84 | 389 | 97 | 24 | 239 | 0 |

*Joint program with the Department of Energy.

**Note:** "Pres. Req." = Presidential request; "Auth." = Authorization; "Enact." = Enacted; "SSAN" = Such sums as necessary. Sec. 9003 and Sec. 9005 have not been implemented.

a. Represents a combination of the amount authorized by the 2002 Farm Bill, less any reductions in annual appropriations acts, plus discretionary funding provided where applicable.

b. The Deficit Reduction Act of 2005 (P.L. 109-171) reduced Sec. 9006 mandatory funding by $20 million in FY2007, leaving $3 million as the authorized level for FY2007.

c. Section 310 (7 U.S.C. 8609) of the Biomass Research and Development Act of 2000 (P.L. 106-224) provides discretionary authorization of $200 million for each of FY2006 through FY2015.

d. Complete data on appropriations by program is not yet available.

## Table 2. House Farm Bill (H.R. 2419): Proposed Funding for Title IX Energy Provisions, FY2008-FY2012

| Title IX Provisions | Related H.R. 2419 Section and Provision Name — Proposed Change or Addition to Current Law | Funding Status[a] | FY2008 | FY2009 | FY2010 | FY2011 | FY2012 | Sum: FY08-12 |
|---|---|---|---|---|---|---|---|---|
| | | | $ millions | | | | | |
| **Current Law** | | | | | | | | |
| Sec. 9002 | Sec. 9002: Federal Procurement of Biobased Product | Discretionary | 2 | 2 | 2 | 2 | 2 | 10 |
| Sec. 9003 | Sec. 9003: Biorefinery Development Grants & Loan Guarantees | Mandatory | 75 | 100 | 125 | 200 | 300 | 800 |
| Sec. 9004 | Sec. 9017: Biodiesel Fuel Education Program | Mandatory | 2 | 2 | 2 | 2 | 2 | 10 |
| Sec. 9005 | Sec. 9004: Energy Audit and Renewable Energy Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9006 | Sec. 9005: Renewable Energy Systems and Energy Eff. Improvements | Mandatory | 50 | 75 | 100 | 125 | 150 | 500 |
| Sec. 9007 | No Provision | No funding | | | | | | |
| Sec. 9008 | Sec. 9006: Biomass Research and Development Act | Mandatory | 35 | 60 | 75 | 100 | 150 | 420 |
| | Additional funding authorization [b] | Discretionary | 200 | 200 | 200 | 200 | 200 | 1,000 |
| Sec. 9009 | "Cooperative Research & Extension Projects" amended to the Biomass Research and Development Act | | | | | | | |
| Sec. 9010 | Sec. 9007: Continuation of Bioenergy Program | Mandatory | 225 | 250 | 275 | 300 | 350 | 1,400 |
| Sec. 9011 | Sec. 9008: Research, Extension, & Educational Programs on Biobased Energy Technologies and Products | Discretionary | 75 | 75 | 75 | 75 | 75 | 375 |
| **Proposed Addition** | | | | | | | | |
| Sec. 9012 | Sec. 9009: Energy Council of USDA | Discretionary | 0 | 0 | 0 | 0 | 0 | 0 |
| Sec. 9013 | Sec. 9010: Farm Energy Production Pilot Program [c] | Discretionary | 1 | 1 | 1 | 1 | 1 | 5 |
| Sec. 9014 | Sec. 9011: Rural Energy Self-Sufficiency Initiative | Discretionary | 5 | SSAN | SSAN | SSAN | SSAN | 5 |
| Sec. 9015 | Sec. 9012: Agr Biofuels from Biomass Internship Pilot Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9016 | Se.c 9013: Feedstock Flexibility Program for bioenergy producers | Mandatory | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9014 | Sec. 9014: Biomass Inventory Report | Discretionary | 0 | 0 | 0 | 0 | 0 | 0 |
| Sec. 9015 | Sec. 9015: Future Farmsteads Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9016 | Sec. 9016: Sense of Congress on Renewable Energy | No funding | | | | | | |
| Sec. 9017 | Sec. 9018: Biomass Energy Reserve | Mandatory | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9018 | Sec. 9019: Forest Biomass for Energy | Mandatory | 15 | 15 | 15 | 15 | 15 | 75 |

| Title IX Provisions | Related H.R. 2419 Section and Provision Name — Proposed Change or Addition to Current Law | Funding Status[a] | FY2008 | FY2009 | FY2010 | FY2011 | FY2012 | Sum: FY08-12 |
|---|---|---|---|---|---|---|---|---|
| | Sec. 9019: Community Wood Energy Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| | Sec. 9020: Supplementing Corn as an Ethanol Feedstock [d] | Discretionary | 4 | 4 | 4 | 4 | 4 | 20 |
| | **Total Discretionary Funding** | | **$287** | **$282** | **$282** | **$282** | **$282** | **$1,415** |
| | **Total Mandatory Funding** | | **$402** | **$502** | **$592** | **$742** | **$967** | **$3,205** |

**Source:** House-passed (July 27, 2007) H.R. 2419. "SSAN" = Such sums as necessary.

a. Budgetary funding availability for FY2008-12 is contingent on cost offsets as detailed in Title XII — Additional Cost Offsets of H.R. 2419.
b. Section 9006 provides discretionary authorization of $200 million for each of FY2006 through FY2015.
c. Section 9010 provides for $5 million for the period FY2008 to FY2012 with no specific annual breakout.
d. Section 9020 authorizes the appropriation of $20 million for the period FY2008 to FY2012 with no specific annual breakout.

## Table 3. Senate Farm Bill (H.R. 2419 with amendments): Proposed Funding for Title IX Energy Provisions, FY2008-FY2012

| Title IX Provisions | Section and Provision Name | Funding Status | FY2008 | FY2009 | FY2010 | FY2011 | FY2012 | Sum: FY08-FY12 |
|---|---|---|---|---|---|---|---|---|
| | | | $ millions | | | | | |
| Sec. 9002 | Biobased Markets Program | Mandatory | 3 | 3 | 3 | 3 | 3 | 15 |
| | Additional funding authorization | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9003 | Biodiesel Fuel Education | Mandatory | 2 | 2 | 2 | 2 | 2 | 10 |
| Sec. 9004 | Biomass Crop Transition: Production Assistance[a] | Mandatory | 26 | 26 | 26 | 26 | 26 | 130 |
| Sec. 9004 | Biomass Crop Transition: Post-Production Assistance[b] | Mandatory | — | 10 | 10 | 10 | — | 30 |
| Sec. 9005 | Biorefinery and Repowering Assistance[a] | Mandatory | 60 | 60 | 60 | 60 | 60 | 300 |
| Sec. 9006 | Bioenergy Program[c] | Mandatory | 49 | 49 | 49 | 49 | 49 | 245 |
| Sec. 9007 | Rural Energy for America Program[a] | Mandatory | 46 | 46 | 46 | 46 | 46 | 230 |
| | Additional funding authorization | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9008 | Biomass Research and Development Act | Mandatory | 15 | 25 | 35 | — | — | 75 |
| | Additional funding authorization | Discretionary | 85 | 85 | 85 | 85 | 85 | 425 |
| Sec. 9009 | Sun Grant Program | Mandatory | 5 | 10 | 10 | — | — | 25 |
| | Additional funding authorization | Discretionary | 70 | 70 | 70 | 70 | 70 | 350 |
| Sec. 9010 | Regional Biomass Crop Experiments | Mandatory | 10 | 20 | 10 | — | — | 40 |
| | Additional funding authorization | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9011 | New Century Farm Project[c] | Discretionary | 3 | 3 | 3 | 3 | 3 | 15 |
| Sec. 9012 | Biochar Research, Development and Demonstration | Discretionary | 3 | 3 | 3 | 3 | 3 | 15 |
| Sec. 9013 | Renewable Woody Biomass for Energy | Discretionary | 5 | 5 | 5 | 5 | 5 | 25 |
| Sec. 9014 | Community Wood Energy Program | Discretionary | 5 | 5 | 5 | 5 | 5 | 25 |
| Sec. 9015 | Rural Energy Systems Renewal | Discretionary | 5 | 5 | 5 | 5 | 5 | 25 |
| Sec. 9016 | Voluntary Renewable Biomass Certification Program | No funding | — | — | — | — | — | 0 |
| Sec. 9017 | Administration | No funding | — | — | — | — | — | 0 |
| Sec. 9018 | Biofuels Infrastructure Study | Discretionary | 1 | 1 | 0 | 0 | 0 | 2 |

| Title IX Provisions | Section and Provision Name | Funding Status | FY2008 | FY2009 | FY2010 | FY2011 | FY2012 | Sum: FY08-FY12 |
|---|---|---|---|---|---|---|---|---|
| | | | $ millions | | | | | |
| Sec. 9019 | Rural Nitrogen Fertilizer Study | Discretionary | 1 | — | — | — | — | 1 |
| Sec. 9020 | Study of Life Cycle Analysis of Biofuels | No funding | — | — | — | — | — | 0 |
| Sec. 9021 | E-85 Fuel Program[c] | Discretionary | 4 | 4 | 4 | 4 | 4 | 20 |
| Sec. 9022 | Research and Development of Renewable Energy | Discretionary | 5 | 5 | 5 | 5 | 5 | 25 |
| | Additional funding authorization[d] | Discretionary | 110 | 110 | 110 | 110 | 110 | 550 |
| | Additional funding authorization[d] | Discretionary | 110 | 110 | 110 | 110 | 110 | 550 |
| Sec. 9023 | Northeast Dairy Nutrient Management and Energy Development Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| Sec. 9024 | Report on the Growth Potential for Cellulosic Material | No funding | — | — | — | — | — | 0 |
| Sec. 9025 | Future Farmsteads Program | Discretionary | SSAN | SSAN | SSAN | SSAN | SSAN | SSAN |
| | **Total Discretionary Funding** | **Discretionary** | **$407** | **$406** | **$406** | **$406** | **$406** | **$2,028** |
| | **Total Mandatory Funding** | **Mandatory** | **$216** | **$251** | **$251** | **$196** | **$186** | **$1,100** |

**Source:** H.R. 2419 (Food and Energy Security Act of 2007; engrossed amendment as agreed to by Senate (EAS)) passed by the Senate on Dec. 14, 2007.

"SSAN" = Such sums as necessary.

a. The total funding authorization is fully available in FY2008 and is to remain available until expended; annual designations are made by CRS to facilitate comparisons.
b. Post-production activities include harvesting, collection, transport, and storage of renewable biomass.
c. Authorized appropriations are for the entire period FY2008 to FY2012 with no specific annual breakout; annual designations are made by CRS to facilitate comparisons.
d. Section 9022 includes additional discretionary funding authorizations of $110 million for each of FY2008 to FY2012 for the Under Secretary for Research, Education, and Economics acting through the Agricultural Research Service of USDA; and of $110 million for each of FY2008 to FY2012 for the Secretary of USDA and the Secretary of DOE for development of smaller-scale biorefineries and biofuel plants.

**Table 4. Comparison of Current Law with the House-Passed 2007 Farm Bill (H.R. 2419; July 27, 2007) and the Senate-Passed 2007 Farm Bill (H.R. 2419 with amendments; December 14, 2007)**

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **TITLE IX: Energy** | | |
| **Definitions** | | |
| Sec. 9001. Defines Administrator, Biomass, Biobased Product, Biomass, Procuring Agency, Renewable Energy, Rural Small Business, and Secretary. | Sec. 9001. No changes to definitions. | Sec. 9001. Adds several definitions including "Advanced Biofuels," which excludes any fuel derived from corn-starch, but includes ethanol derived from other plant starches (e.g., sorghum), sugar, as well as cellulosic biomass or organic waste; it also includes organically-derived biogas, butanol or other alcohols; and, notably, biodiesel. Other noteworthy definitions include: Biobased Product; Biomass Conversion Facility, Biorefinery, Intermediate Ingredient or Feedstock; Renewable Biomass, and Renewable Energy. |
| **Biodiesel Fuel Education Program** | | |
| Section 9004. The program, administered by USDA's Cooperative State Research, Education, and Extension Service, awards competitive grants to nonprofit organizations that educate governmental and private entities operating vehicle fleets, and educates the public about the benefits of biodiesel fuel use. Mandatory CCC funding of $1 million was authorized for each of FY2003 through FY2007. | Section 9017. Extends the Biodiesel Fuel Education Program through FY2012 with mandatory funding of $2 million for each of FY2008 through FY2012. | Section 9003. Same as H.R. 2419. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Federal Procurement of Biobased Products** | | |
| Sec. 9002. Statutes currently require federal agencies to purchase biobased products under certain conditions and authorize a voluntary biobased labeling program. USDA regulations define biobased products, identify biobased product categories, and specify the criteria for qualifying those products for preferred procurement. Mandatory CCC funding of $1 million is authorized for each of FY2002 through FY2007 for testing biobased products. | Section 9002. Continues federal commitment to biobased product preference in its purchases. Requires annual reports from agencies to Administrator of Federal Procurement Policy. Also requires annual reports from USDA to Congress on implementation status. Clarifies that products with at least 5% of intermediate ingredients and feedstock that are biobased should be considered under the preference. Requires USDA to complete rulemaking on labeling regulation. Increases mandatory CCC funding to $2 million for each of FY2008 through FY2012 for bio-product testing, labeling, and procurement research, promotion, and awareness initiatives. | Section 9002: Continues the Federal Biobased Products Procurement Program, clarifying that biobased intermediate ingredients and feedstocks qualify under the program. It also requires the Secretary to establish a voluntary labeling program for biobased products — "USDA Certified Biobased Product." Additionally, this section provides grants for education and awareness of bioenergy and biobased products. This section provides $3 million per year in mandatory funding for FY2008 through FY2012. |
| **Energy Audit and Renewable Energy Development Program** | | |
| Section 9005. A competitive grant program for eligible entities to provide energy audits and technical assistance to agricultural producers and rural small businesses to assist them in becoming more energy efficient and in using renewable energy technology and resources. Authorized appropriations of such sums as are necessary to carry out the program for each of FY2002 through FY2007. | Section 9004. Extends the Energy Audit and Renewable Energy Development Program through FY2012. | Section 9007. Extends the Energy Audit and Renewable Energy Development Program through FY2012, but folds it into the new Rural Energy for America Program where mandatory funding is available (see the Renewable Energy Systems section for more information). |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Biorefinery Development Grants** | | |
| Section 9003. Established a grant program to help finance the cost of developing and constructing biorefineries and biofuel production plants to carry out projects to demonstrate the commercial viability of converting biomass to fuels or chemicals. No mandatory funding was authorized and no discretionary funding has been appropriated for the program. Therefore, no implementation regulations have been developed. | Section 9003. Renamed as the Biorefinery Development Program and extended through FY2012. It replaces grants with new loan guarantee authority for biorefineries — one-half for loans less than $100 million, and the other half for loans up to $250 million. The loan guarantee would cover 90% of an eligible loan. Requires that construction contractors and subcontractors on federally assisted loan guarantee projects pay their employees not less than the prevailing wage in the same locality under the Davis-Bacon Act. Authorizes mandatory CCC funding of $75 million in FY2008; $100 million in FY2009; $125 million in FY2010; $200 million in FY2011; and $300 million in FY2012 for a total in new mandatory funding of $800 million during FY2008-FY2012. | Section 9005: Renamed the Biorefinery and Repowering Assistance Program, it refocuses emphasis on "advanced biofuel" production in renewable-fuel-powered biorefineries. Provides competitive grants for up to 50% of project costs for pilot- and demonstration-scale biorefineries; matching funds for feasibility studies; competitive grants for up to 20% of total project costs for the repowering of fossil-fueled biomass conversion facilities with renewable resources; and provides loan guarantees for up to 80% of total eligible project costs for the development and construction of commercial-scale biorefineries and the repowering of biomass conversion facilities with renewable energy.<br>Any loan guaranteed for commercial scale biorefineries cannot exceed $250 million and a loan guaranteed for repowering cannot exceed $70 million. The section includes a preference for local ownership of these facilities.<br>Provides $300 million in mandatory funding during FY2008-FY2012. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Renewable Energy Systems** | | |
| Section 9006. The Renewable Energy Systems and Energy Efficiency Program, administered by USDA's Rural Development Agency, authorizes loans, loan guarantees, and grants to farmers, ranchers, and rural small businesses to purchase and install renewable energy systems and to make energy efficiency improvements. Grant funds may be used to pay up to 25% of project costs; combined grants and loans or loan guarantees may fund up to 50% of project cost. Eligible projects include those that derive energy from wind, solar, biomass, or geothermal sources. Projects using energy from those sources to produce hydrogen from biomass or water are also eligible. Mandatory CCC funding of $23 million was made available for each of FY2003 through FY2007. Unspent money lapses at the end of each year. | Section 9005. Renamed as the "Rural Energy for America Program." Raises the loan guarantee level from $10 million to $25 million. Grant fund cost share is retained at up to 25% of project costs; however, combined grants and loans (including guarantees) is expanded to 75% of project cost. Allows for feasibility studies to be eligible for the program. Increases mandatory CCC funding to $50 million in FY2008; $75 million in FY2009; $100 million in FY2010; $125 million in FY2011; and $150 million in FY2012 for a total in new mandatory funding of $500 million during FY2008-FY2012. | Section 9007. Renamed as the Rural Energy for America Program, this section adds the option to receive a production incentive payment in lieu of a grant, and stipulates that a grant may cover up to 25% of project costs while a loan guarantee may cover up to 75% of the cost.<br>It creates a separate allocation of funding for grants and loan guarantees to build and evaluate on-farm and community animal manure-to-energy facilities such as methane digesters.<br>It also establishes a streamlined review and application process for small-scale projects (under $20,000), and requires that 20% of funds be used for such projects.<br>The Energy Star Program is extended in this section to identify and promote energy-efficient equipment and facilities in the agricultural sector.<br>Provides $230 million in mandatory funding for FY2008 to remain available until expended, with not less than 15% of this funding dedicated to the animal manure-to-energy provision. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Biomass Research and Development Act** | | |
| Section 9008. The program — created originally under the Biomass Research and Development Act (BRDA) of 2000 — provides competitive funding for research, development, and demonstration projects on biofuels and bio-based chemicals and products, administered jointly by USDA and DOE. Specified mandatory CCC funding of $5 million in FY2002 and $14 million for each of FY2003 through FY2007 (available until expended). Additional appropriation authority of $200 million for each of FY2006 through FY2015. | Section 9006. Extends the program through FY2012.<br>Authorizes mandatory CCC funding of $35 million in FY2008; $60 million in FY2009; $75 million in FY2010; $100 million in FY2011; and $150 million in FY2012 for a total in new mandatory funding of $420 million during FY2008-FY2012.<br>Includes the appropriations authority for $200 million in each of FY2008 through FY2015. | Section 9008. Extends the program and moves it in statute to this act. Adds new emphasis on utilization of byproducts such as dried distillers grains and solubles (DDGS) and development of technologies for harvest, storage, preprocessing and transportation of renewable biomass feedstocks.<br>Provides mandatory funding to remain available until expended of $15 million in FY2008, $25 million in FY2009, and $35 million in FY2010 for a total in new mandatory funding of $75 million during FY2008-FY2012.<br>Also includes the appropriations authority for $85 million in each of FY2008 through FY2012. |
| **Bioenergy Program** | | |
| Section 9010. Originally created by a 1999 Executive Order during the Clinton Administration, the bioenergy program provides CCC incentive payments to biofuels producers based on year-to-year increases in the quantity of biofuel produced. Mandatory CCC funding of $150 million was made available for each of FY2002 through FY2006. No funding was authorized for FY2007. | Section 9007. Renews and extends the bioenergy program through FY2012. Ethanol produced from corn starch is excluded. Expands eligibility for the production incentive to combined heat and power production using biomass at biofuels plants and biomass gasification.<br>Provides mandatory CCC funding of $225 million in FY2008; $250 million in FY2009; $275 million in FY2010; $300 million in FY2011; and $350 million in FY2012 for a total of $1.4 billion during FY2008-FY2012. | Section 9006. Renews and extends the Bioenergy Program through FY2012. Bases the payment rate on: (1) advanced biofuel production, (2) feedstock prices, and (3) net non-renewable energy content of the biofuel. This will benefit those purchasing feedstocks for cellulosic biofuels and biodiesel.<br>The program is not available to those claiming a biofuel production tax credit (see Sec. 12312) or with biofuel production capacity greater than 150 million gallons per year.<br>Provides $245 million in mandatory funding for FY2008 through FY2012. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Research, Extension, and Educational Programs on Biobased Energy Technologies and Products** | | |
| Section 9011. This provision was added subsequent to the 2002 farm bill under the "Sun Grant Research Initiative Act of 2003." Establishes 5 national sun grant research centers based at land-grant universities and each covering a different national region. The purpose is to enhance coordination and collaboration between USDA, DOE, and land-grant universities in the development, distribution, and implementation of biobased energy technologies.<br>Authorized appropriations of $25 million in FY2005, $50 million in FY2006, and $75 million for each of FY2006 through FY2010 for a total in discretionary funding of $150 million during FY2005-FY2010. | Section 9008. Extends the sun grant programs through FY2012 with authorized appropriations of $75 million for each of FY2008 through FY2012 for a total in discretionary funding of $375 million during FY2008-FY2012. . | Section 9009. Reauthorizes the Sun Grant Program through FY2012 and establishes a 6th regional center — Western Insular Pacific Sub-Center — at the University of Hawaii.<br>Competitive grants are available to land-grant schools within each region.<br>Provides, for the first time, mandatory funding for the Sun Grant program of $5 million in FY2008, $10 million in each of FY2009 and FY2010 (available until expended) for a total of $25 million for FY2008 through FY2012.<br>Also includes the appropriations authority for $70 million in each of FY2008 through FY2015. |
| **Administration / Energy Council of USDA** | | |
| No provision. | Section 9009 (would be appended as Section 9012). Directs the Secretary to establish an energy council to coordinate the energy policy of USDA and consult with other federal departments and agencies. No new funding. | Section 9017. Expands and codifies the scope of responsibilities of the USDA related to the coordination of energy programs and specifies that USDA should have one entity serving as central coordinator for these programs. Responsibilities of the coordinating entity include provision of oversight and coordination of energy-related activities within USDA, as well as coordination of related activities with other Federal, State, and local agencies. This entity also will establish and maintain a public database to facilitate information sharing, and coordinate and disperse information on agricultural sector energy research and Federal agricultural energy programs. No new funding. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Farm Energy Production Pilot Program** | | |
| No provision. | Section 9010 (would be appended as Section 9013). Establishes a pilot program to provide grants to farmers to demonstrate the feasibility of making a farm become energy neutral using existing technologies. Authorizes appropriations of $5 million for FY2008 through FY2012. | No provision. |
| **Regional Biomass Crop Experiments** | | |
| No provision. | No provision. | Section 9010. Provides for 10 competitive grants to 10 geographically dispersed land-grant colleges and universities to establish regional bioenergy crop research experiments. The universities are required to commit adequate crop land for these on-going crop experiments. Crop experiments are to include all appropriate biomass species, including perennials, annuals, and woody biomass species. Calls for coordination among participants, with the Biomass Research and Development Board and with the Sun Grant Centers, and the establishment of a "best practices" database on all aspects of bioenergy crop production. Provides mandatory funding of $10 million for FY2008; $20 million for FY2009; and $10 million for FY2010. |
| **New Century Farm Project** | | |
| No provision. | No provision. | Section 9011. Establishes the New Century Farm Project to serve as a model farm. Authorizes appropriations of $15 million for FY2008 through FY2012, to remain available until expended. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Rural Energy Initiatives** | | |
| No provision. | Section 9011 (would be appended as Section 9014). Establishes the Rural Energy Self-Sufficiency Initiative to provides cost-share grants to enable eligible rural communities (of less than 25,000) to substantially increase their energy self-sufficiency. The grant may not exceed 75% of costs. Requires a report to Congress on best practices/approaches. Total grants under this section are limited to no more than 5 per year, and authorizes appropriations of not more than $5 million for FY2008, and such sums as are necessary for FY2009 through FY2012. | Section 9015. Establishes a program — the Rural Energy Systems Renewal Program — of competitive cost-shared grants (50% maximum federal share) for rural communities to assess their energy systems and formulate strategies for improvements. Authorizes discretionary funding of $5 million for each of FY2008 through FY2012. |
| **Agricultural Biofuels from Biomass Internship Program** | | |
| No provision. | Section 9012 (would be appended as Section 9015). Provides 3rd and 4th year undergraduate or graduate students from universities in states with substantial farm-based economies with opportunity to work with U.S. government and nongovernmental organizations on matters pertaining to renewable energy policies. Requires state matching funds of $1 for every $2 of federal. Authorizes appropriations of such sums as are necessary to carry out the program. | No provision. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Feedstock Flexibility Program for Bioenergy Producers** | | |
| No provision. | Section 9013 (would be appended as Section 9016). Requires that USDA establish (in FY2008) and administer a sugar-for-ethanol program using sugar intended for food use but deemed to be in surplus. USDA would implement the program only in those years where purchases are determined to be necessary to ensure that the sugar program operates at no cost. The use of such sums as necessary to carry out the program is authorized. | See Title I, Section 1501, Sugar Program, for a similar sugar-for-ethanol provision entitled the "Feedstock Flexibility Program for Bio-Energy Producers". |
| **Biomass Inventory Report** | | |
| No provision. | Section 9014. Instructs USDA to conduct a national inventory of biomass resources on a county-by-county basis and submit this information as a report to Congress within one year of enactment. | No provision. |
| **Future Farmsteads Program** | | |
| No provision. | Section 9015. Establishes a program to equip a farm entity (house and lands), in each of 5 regions of the country, with technologies to improve farm energy production and use efficiencies. Each designated entity would serve as a working example to farmers and as an educational, research, and demonstration facility for research related to renewable energy or energy conservation technologies. Authorizes appropriations of such sums as are necessary to carry out the program. | Section 9025. Same as H.R. 2419. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Sense of Congress on Renewable Energy** | | |
| No provision. | Section 9016. Declaration of Congress' recognition of the importance of renewable energy in meeting a growing national energy demand, diversifying the U.S. energy portfolio, and increasing U.S. energy independence; while allowing market forces to remain an important instrument in determining renewable energy sources and technology. | Section 9002. Sense of Congress concerning higher levels ethanol blended gasoline (i.e., intermediate blends such as E13, E15, E20 and higher). Encourages Secretary of Agr. to collaborate with DOE, DOT, and EPA in study of economic and environmental effects of intermediate blends of ethanol in U.S. fuel supply. |
| **New Program to Facilitate Biomass Feedstock Production** | | |
| No provision. | Section 9018. Establishes a new Biomass Energy Reserve (BER).<br>Provides financial and technical assistance (including five-year contracts) to landowners and operators to grow dedicated energy crops as feedstock for cellulosic ethanol and other energy production. Incentives also cover producer harvesting, storing, and transporting of biomass to bioenergy facilities.<br>BER projects would have to be within a 50-mile radius of a bioenergy facility. Authorizes mandatory funding of such sums as are necessary. | Section 9004. Creates the Biomass Crop Transition program to stimulate production of annual and perennial biomass crops.<br>USDA provides technical and financial assistance with establishment costs for the production of bioenergy crops for use in a biomass conversion facility. Provides $130 million in mandatory funding for FY2008 through FY2012 to support biomass production.<br>Also provides $10 million in mandatory funding for each of FY2009 through FY2011 (to remain available until expended) for a fixed assistance payment to agricultural producers for production, collection, harvest, storage and transportation of biomass crops for use in a biomass conversion facility.<br>Requires the Secretary to provide public information on the production potential, environmental impacts, and best practices for production, harvesting, transport and storage of biomass crops and requires participants to provide information as needed for that purpose. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Forest Biomass for Energy** | | |
| No provision. (Would be appended as Section 9018.) | Section 9019. New competitive research and development program to encourage the use of woody biomass for bioenergy production. Provides mandatory CCC funding of $15 million for each of FY2008 through FY2012. | Section 9013. Same program as H.R. 2419, but with discretionary (not mandatory) funding of $5 million for each of FY2008 through FY2012. |
| **Community Wood Energy Program** | | |
| No provision. | Section 9019. New program to provide matching grants to State and local governments to acquire community wood energy systems for public buildings and to implement a community wood energy plan. Authorizes discretionary funding of such sums as are necessary. | Section 9014. Same program as H.R. 2419, but with discretionary funding of $5 million for each of FY2008 through FY2012. |
| **Supplementing Corn as an Ethanol Feedstock** | | |
| No provision. | Section 9020. New grant program for demonstration of supplementing corn as an ethanol feedstock with sweet sorghum and switchgrass. The program permits grants of up to $1 million each to no more than 20 universities for three-year demonstration programs. Authorizes CCC funding of $20 million. | No provision. |
| **Biochar Research, Development and Demonstration** | | |
| No provision. | No provision. | Section 9012. Creates a program of competitive grants for research and demonstration of the production and use of biochar in the agricultural sector. Provides discretionary funding of $3 million for each of FY2008 through FY2012. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Voluntary Renewable Biomass Certification Program** | | |
| No provision. | No provision. | Section 9016. Establishes a voluntary certification program for renewable biomass that is grown using sustainable practices. No new funding. |
| **Biofuels Infrastructure Study** | | |
| No provision. | No provision. | Section 9018. Directs USDA, in collaboration with the Secretaries of Energy and Transportation and the EPA Administrator, to conduct a study of the infrastructure needs associated with a significant expansion in biofuel production and use. Specifically includes dedicated ethanol pipeline feasibility studies and examination of water resource needs. Requires a report to Congress on the results of the studies.<br>Authorizes discretionary funding of $1 million for each of FY2008 and FY2009. |
| **Rural Nitrogen Fertilizer Study** | | |
| No provision. | No provision. | Section 9019. Directs USDA to assess the feasibility of producing nitrogen fertilizer from renewable energy (and submit a report to Congress within 270 days). Provides discretionary funding of $1 million for FY2008. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Study of Life Cycle Analysis of Biofuels** | | |
| No provision. | No provision. | Section 9020. This provision directs USDA in consultation with DOE and EPA to conduct a study of methods for evaluating the life-cycle greenhouse gas emissions of conventional fuels and biofuels, and to provide (in form of report to Congress within one year) results and recommendations for a streamlined, simplified method for evaluating the lifecycle greenhouse gas emissions of fuels. No new funding. |
| **E-85 Fuel Program** | | |
| No provision. | No provision. | Section 9021. Provides cost-share grants of up to 20% of total costs for installation of E-85 fuel infrastructure.<br>Authorizes appropriations (i.e., discretionary funding) of $20 million for FY2008 through FY2012 to remain available until expended. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Research and Development of Renewable Energy** | | |
| No provision. | No provision. | Section 9022. USDA will conduct research, with the Colorado Renewable Energy Collaboratory, relating to various aspects of renewable energy including biomass crops adapted to arid and semi-arid regions, and storage and conversion technologies for wind and solar energy. Authorizes discretionary funding of $5 million for each of FY2008 through FY2012. Additional discretionary funding of $110 million to USDA Under Secretary for Research, Education, and Economics for cellulosic biofuel research for each of FY2008 through FY2012; and additional discretionary funding of $110 million to USDA/DOE for development of small-scale biorefineries for each of FY2008 through FY2012. |
| **Northeast Dairy Nutrient Management and Energy Development Program** | | |
| No provision. | No provision. | Section 9023. Establishes USDA program to provide grants to a consortium of Northeast U.S. land-grant colleges and universities to conduct research, extension, and demonstration projects for dairy nutrient management and energy development . Authorizes discretionary funding of such sums as are necessary. |
| **Report on the Growth Potential for Cellulosic Material** | | |
| No provision. | No provision. | Sec. 9024. Sec. of Agriculture shall submit a report (within 18 months) detailing state-by-state analysis of the potential for cellulosic feedstock production. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **Title XII: Trade and Tax Provisions; Subtitle C — Energy Provisions[16]** | | |
| **PART I — Electricity Generation: Credit for Residential and Business Wind Property** | | |
| No provision. | No provision. | Sec. 12301. Expands an existing 30% tax credit (Internal Revenue Code of 1986 (IRC86), Sections 25D and 48) available for solar and fuel cell energy to qualified residential and business wind energy property expenses made after Dec. 31, 2007 and in service prior to Jan. 1, 2009. |
| **PART I — Electricity Generation: Landowner Incentive to Encourage Electric Transmission Build-Out** | | |
| No provision. | No provision. | Sec. 12302. Provides an exclusion from gross income for any qualified electric transmission easement payments. |
| **PART I — Electricity Generation: Exception to the Reduction of Renewable Electricity Credit** | | |
| No provision. | No provision. | Sec. 12303. Provides an exception to reductions in tax credits (per IRC86, section 45) for loans, loan guarantees, or grants to farmers, ranchers, or rural small business by USDA. |
| **PART II — Alcohol Fuel: Expansion of Special Allowance to Cellulosic Biomass Alcohol Fuel Plant Property** | | |
| No provision. | No provision. | Sec. 12311. Extends special depreciation (ICR86, section 168(1)) allowance to cellulosic ethanol plants. |

[16] For more information on the Senate's Title XII, see *Description of the Chairman's Mark of the "Heartland, Habitat, Harvest, and Horticulture Act of 2007"*, Joint Committee on Taxation, JCX-94-07, October 2, 2007.

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **PART II — Alcohol Fuel: Credit for Production of Cellulosic Biomass Alcohol** | | |
| Under current law (26 U.S.C. 40; American Jobs Creation Act (AJCA) of 2004, P.L. 108-357), cellulosic ethanol would receive the current tax credit of $0.51 per gallon available to any ethanol production as provided through Dec. 31, 2010. | No change from current law. | Sec. 12312. Provides for a total income tax credit of $1.25 per gallon of cellulosic ethanol produced (inclusive the standard ethanol PTC of $0.51/gal. and the small producer credit of $0.10/gal.). The 15 million gallon limitation on the $0.10 credit is waived for small cellulosic ethanol producers. Applicable only for domestically produced cellulosic ethanol. The producer credit is extended through April 1, 2015. |
| **PART II — Alcohol Fuel: Extension of Small Ethanol Producer Credit** | | |
| Under current law (26 U.S.C. 40; Energy Policy Act of 2005, P.L. 109-58) producers with annual capacity of not more than 60 million gallons are eligible for an additional tax credit of $0.10 per gallon on the first 15 million gallons of ethanol production through Dec. 31, 2010. | No change from current law. | Sec. 12313. Extends the small producer tax credit through Dec. 31, 2012. |
| **PART II — Alcohol Fuel: Credit for Producers of Fossil Free Alcohol** | | |
| No provision. | No provision. | Sec. 12314. Proposes a new tax credit of $0.10 per gallon for small ethanol production facilities (of not more than 60 million gallons) that do not use a fossil-based resource for power; to be available through Dec. 31, 2012. |
| **PART II — Alcohol Fuel: Modification of Alcohol Credit** | | |
| Currently any ethanol production is eligible for a tax credit of $0.51 per gallon as provided under current law (26 U.S.C. 40; AJCA of 2004, P.L. 108-357) through Dec. 31, 2010. | No provision. | Sec. 12315. Proposes reducing the ethanol tax credit of $0.51 per gallon to $0.46 per gallon beginning in the first calendar year after the year in which 7.5 billion gallons of ethanol is produced. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **PART II — Alcohol Fuel: Calculation of Volume of Alcohol for Fuel Credits** | | |
| Under current law (26 U.S.C. 40; AJCA of 2004, P.L. 108-357) the volume of bio-alcohol counted as fuel eligible for the tax credit may include up to 5% of the volume as denaturant. | No provision. | Sec. 12316. Reduces the permissible volume of denaturant to 2% for purposes of calculating the volume of alcohol eligible for the tax credit. |
| **PART II — Alcohol Fuel: Ethanol Tariff Extension** | | |
| Under current law (Heading 9901.00.50 of the Harmonized Tariff Schedule (HTS)) imports of ethyl alcohol are subject to a duty of 14.27¢ per liter ($0.54 per gallon) and a duty of 5.99¢ per liter (Heading 9901.00.52; HTS) on imports of ethyl tertiary-butyl ether through Dec. 31, 2008. | No provision. | Sec. 12317. Extends the tariff period for imported ethanol or mixtures of ethanol (headings 9901.00.50 and 9901.00.52 of the HTS) through Dec. 31, 2010. |
| **PART II — Alcohol Fuel: Limitations on, and Reductions of, Duty Drawback on Certain Imported Ethanol** | | |
| Under current law (Section 1313 of the Tariff Act of 1930, as amended) permits the refund of duty if the duty-paid good is re-exported or used to make a good that is exported. In particular, a person who manufactures gasoline with ethanol subject to the duty imposed under either HTS 9901.00.50, can export jet fuel (which does not involve ethanol) and obtain a refund of the duty paid. | No provision. | Sec. 12318. Eliminates the ability to obtain a refund of the duty imposed under HTS 9901.00.50 on imported ethanol by substitution of either ethanol not subject to the duty, or of another petroleum product, that is exported to obtain the drawback. |
| **PART III — Biodiesel & Renewable Diesel Fuel: Extension and Modification of Credit for Biodiesel and Renewable Diesel Used as Fuel** | | |
| Under current law (26 U.S.C. 40A) tax credits available for biodiesel and renewable diesel used as fuel, as well as the small biodiesel producers tax credit, expire on Dec. 31, 2008. | No provision. | Sec. 12321. Extends the tax credits available for biodiesel and renewable diesel used as fuel through Dec. 31, 2010; extends the small biodiesel producers tax credit through Dec. 31, 2012. |

| 2002 Farm Bill (P.L. 107-171) or Current Law (as indicated) | House-Passed (July 27, 2007) Farm Bill (H.R. 2419) | Senate-Passed (Dec. 14, 2007) Farm Bill (H.R. 2419 EAS) |
|---|---|---|
| **PART III — Biodiesel & Renewable Diesel Fuel: Treatment of Qualified Alcohol Fuel Mixtures & Qualified Biodiesel Fuel Mixtures as Taxable Fuels** | | |
| No provision. | No provision. | Sec. 12322. Adds qualified alcohol fuel mixtures and qualified biodiesel fuel mixtures to the definition of taxable fuel and requires all producers of qualified mixtures to meet certification requirements and provide documentation of required fuel tests. |
| **PART IV — Alternative Fuel: Extension and Modification of Alternative Fuel Credit** | | |
| The Internal Revenue Code (IRC) of 1986, Sections 6526 and 6427, provides a $0.50 per gallon excise tax credit through Sept. 30, 2009, for most alternative fuels; and through Sept. 30, 2014 for liquefied hydrogen. | No provision. | Sec. 12331. Includes compressed or liquified biomass gas as an alternative fuel and extends the alternative fuel excise tax credit through Dec. 31, 2010, for all fuels other than hydrogen. Liquefied fuel from coal (CTL) produced under the Fischer-Tropsch process must sequester at least 50% (increasing to 75% by Dec. 31, 2010) of CO2 emissions to qualify for the credit. |
| **PART IV — Alternative Fuel: Extension of Alternative Fuel Vehicle Refueling Property Credit** | | |
| The IRC of 1986, Section 30A, provides a 30% credit for qualified clean-fuel vehicle refueling installation costs through Dec. 31, 2009. | No provision. | Sec. 12332. Extends the 30% alternative refueling property credit (capped at $30,000) for non-hydrogen property through Dec. 31, 2010. |
| **PART V — Agricultural Provisions: Credit for Energy Efficient Motors** | | |
| No provision. | No provision. | Sec. 12409. Provides a tax credit for the purchase of qualified energy efficient motors that meet or exceed certain energy efficiency standards, subject to limitations. |