

CRS Report for Congress

Biofuels in the 2007 Energy and Farm Bills: A Side-by-Side Comparison

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Prepared for Members and
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Summary

This report provides a side-by-side comparison of biofuels-related provisions of current law with comparable provisions in the House and Senate energy and farm bills. The House energy bill, H.R. 3221 (the combined New Direction for Energy Independence, National Security, and Consumer Protection Act and Renewable Energy and Energy Conservation Tax Act of 2007) was approved by the House on August 4, 2007. The Senate approved its energy bill, H.R. 6 (the Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007) on June 21, 2007. The House passed its Farm Bill, H.R. 2419 (the Farm, Nutrition, and Bioenergy Act of 2007) on July 27, 2007. The Senate Agriculture Committee approved its Farm Bill, S. 2302 (the Food and Energy Security Act of 2007), on October 25, 2007. The Senate began floor consideration of the bill November 5, 2007.

These bills cover a wide range of energy and agricultural topics with extensive attention to biofuels, including ethanol and biodiesel.

Key biofuels-related provisions of the two bills include

- a major expansion of the renewable fuel standard (RFS) established in the Energy Policy Act of 2005 (P.L. 109-58) [Senate energy bill];
- expansion and/or modification of tax credits for alternative fuel refueling infrastructure and for ethanol, and renewable diesel fuels [House energy bill, Senate farm bill];
- grants and loan guarantees for biofuels research, development, deployment, and production [all four bills];
- studies of the potential for ethanol pipeline transportation, expanded biofuel use, market and environmental impacts of increased biofuel use, and the effects of biodiesel on engines [both energy bills, Senate farm bill]; and
- reauthorization of biofuels R&D at the U.S. Departments of Energy and Agriculture [all four bills].

This report includes information from CRS Report RL34130, *Renewable Energy Policy in the 2007 Farm Bill*, by Randy Schnepf, and CRS Report RL34136, *Biofuels Provisions in H.R. 3221 and H.R. 6: A Side-by-Side Comparison*, by Brent D. Yacobucci.

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Biofuels in the 2007 Energy and Farm Bills: A Side-by-Side Comparison

Introduction

With recent high energy prices, concerns over energy security, desire to promote rural business, and the desire to reduce air pollutant and greenhouse gas emissions, there is ongoing congressional interest in promoting greater use of alternatives to petroleum fuels. Biofuels — transportation fuels produced from plant and animal materials — have attracted 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.¹

The Energy Policy Act of 2005 (P.L. 109-58) established a renewable fuel standard (RFS). The RFS requires the increasing use of renewable fuel in gasoline, starting at 4.0 billion gallons in 2006, increasing to 7.5 billion gallons in 2012. Although not an explicit ethanol mandate, it is expected that the majority of this requirement will be met using corn-based ethanol.² About 4.0 billion gallons of corn ethanol were consumed in 2005, so the RFS represents roughly a doubling of U.S. ethanol consumption over seven years. However, the U.S. ethanol industry is expanding rapidly, outpacing the required growth in the RFS. As of November 1, 2007, existing U.S. production capacity was roughly 7.0 billion gallons per year, with another 6.5 billion gallons of capacity under construction or in the planning stages. Because this capacity will likely outpace the current RFS, some proponents of corn-based ethanol support an increase in the mandated levels of the RFS.

Because of the rapid expansion of U.S. corn ethanol capacity, there are concerns that the United States will soon reach the limit of ethanol that can be produced from corn. Critics of corn-based ethanol argue that the industry does not need continued government support, and that current corn demand for ethanol is putting a strain on corn and other grain markets, leading to increases in other commodity prices, such as livestock feed, which then leads to higher dairy and meat prices.³ Critics also argue that the environmental costs of corn-based ethanol may outweigh the benefits.

¹ For more information on federal biofuels incentives, see CRS Report RL33572, *Biofuels Incentives: A Summary of Federal Programs*, by Brent D. Yacobucci.

² For more information on ethanol, see CRS Report RL33290, *Fuel Ethanol: Background and Public Policy Issues*, by Brent D. Yacobucci.

³ For more information on the issues surrounding rapid ethanol expansion, see CRS Report RL33928, *Ethanol and Biofuels: Agriculture, Infrastructure, and Market Constraints Related to Expanded Production*, by Brent D. Yacobucci and Randy Schnepf.

Because of concerns over corn-based ethanol, as well as interest in diversifying energy supply, there is growing interest in developing biofuels that rely on other sources of biomass, including agricultural wastes, municipal solid waste, and dedicated energy crops such as perennial grasses, fast-growing trees, and algae. This interest has led to proposals to support and/or mandate biofuels produced from feedstocks other than corn starch through explicit requirements, R&D funding, and/or tax incentives.⁴ Non-corn biofuels could include fuels produced from cellulosic material (such as perennial grasses), ethanol produced from sugarcane or beets, and biodiesel or renewable diesel produced from vegetable or animal oils.⁵

Key Elements of House and Senate Energy and Farm Bills

This report provides a side-by-side comparison of biofuels-related provisions in the House and Senate energy and farm bills. The House energy bill, H.R. 3221 (the combined New Direction for Energy Independence, National Security, and Consumer Protection Act and Renewable Energy and Energy Conservation Tax Act of 2007) was approved by the House on August 4, 2007. The Senate approved its energy bill, H.R. 6 (the Renewable Fuels, Consumer Protection, and Energy Efficiency Act of 2007) on June 21, 2007.⁶ The House passed its Farm Bill, H.R. 2419 (the Farm, Nutrition, and Bioenergy Act of 2007) on July 27, 2007. The Senate Agriculture Committee approved its Farm Bill, S. 2302 (the Food and Energy Security Act of 2007), on October 25, 2007.⁷ The Senate began floor consideration of this bill November 5, 2007.

All four bills cover a wide range of energy and agricultural topics in addition to biofuels.

Table 1 contains a section-by-section comparison of the biofuels provisions in current law with H.R. 3221, H.R. 6, H.R. 2419, and the Senate Agriculture Committee bill. The table is organized in the same order as H.R. 3221, followed by provisions in H.R. 6, then H.R. 2419, with non-comparable S. 2302 sections shown at the end. Key provisions of the bills include:

- a major expansion of the RFS established in the Energy Policy Act of 2005 [Senate energy bill];

⁴ Non-corn-starch feedstocks include other parts of the corn plant, such as the husks and the stalks, which are high in cellulose.

⁵ For more information on biodiesel, see CRS Report RL32712, *Agriculture-Based Renewable Energy Production*, by Randy Schnepf.

⁶ The House approved its version of H.R. 6 on January 18, 2007. However, this bill is a less comprehensive bill than H.R. 3221 or the Senate version of H.R. 6. Presumably, H.R. 3221 has superseded the House version of H.R. 6.

⁷ Provisions from S. 2242, the Senate Finance Committee's farm bill tax provisions, are included under the Senate Agriculture Committee bill.

- expansion and/or modification of tax credits for alternative fuel refueling infrastructure and for ethanol, and renewable diesel fuels [House energy bill, Senate farm bill];
- grants and loan guarantees for biofuels research, development, deployment, and production [all four bills];
- studies of the potential for ethanol pipeline transportation, expanded biofuel use, market and environmental impacts of increased biofuel use, and the effects of biodiesel on engines [all four bills]; and
- reauthorization of biofuels R&D programs at the U.S. Departments of Energy and Agriculture [all four bills].

Table 1. Comparison of Current Law with Biofuels Provisions in the House and Senate Energy and Farm Bills

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221, Title IV — Science and Technology						
Biofuels and Biorefinery Information Center	No current provision.	Directs the Secretary of Energy to establish a technology transfer center to provide information on biofuels and biorefineries. [Sec. 4402]	Similar provision. [Sec. 127]	No comparable provision.	No comparable provision.	
Biofuels Infrastructure	No current provision.	Directs the Secretary of Energy to conduct an R&D program on the effects of biofuels on existing transportation fuel distribution systems. [Sec. 4403]	Directs the Secretary of Energy to provide grants for pilot programs to expand infrastructure for ethanol/gasoline blends of between 11% and 84% ethanol, and renewable fuel/diesel fuel blends of at least 10% renewable diesel. \$200 million is authorized to be available until expended. [Sec. 121]	No comparable provision.	Directs USDA to study 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. Authorizes \$1 million for each of FY2008-FY2012. [Sec. 9017]	In addition: - Sec. 9301 of H.R. 3221 (below) would provide grants for the installation of renewable fuel infrastructure at retail stations. - Sec. 9304 of H.R. 3221 (below) requires a study of the feasibility of dedicated ethanol pipelines.

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Biodiesel Report	No current provision.	Requires the Secretary of Energy to report to Congress on the R&D challenges to expanding biodiesel use to 2.5% of total diesel fuel use by volume. [Sec. 4404]	Similar provision, but would require a study of the challenges of expanding biodiesel use to 5% of total diesel fuel use. [Sec. 130(a)]	No comparable provision.	No comparable provision.	Currently, biodiesel represents less than 1% of total diesel consumption.
Biogas	No current provision.	Requires the Secretary of Energy to report to Congress on the R&D challenges to expanding biogas and biogas/natural gas blends to 5% of fuel use. [Sec. 4405]	No comparable provision.	No comparable provision.	No comparable provision.	

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Bioresearch Centers for Systems Biology Program</p>	<p>The Department of Energy (DOE) is required to establish a program of R&D and demonstration of microbial and plant systems biology, protein science, and computational biology. Biomedical research and research related to humans are not permitted as part of the program. [Energy Policy Act of 2005 - P.L. 109-58, Sec. 977]</p>	<p>Requires the establishment of at least five bioresearch centers that focus on biofuels to be included in the R&D program established in Sec. 977 of P.L. 109-58. [Sec. 4406]</p>	<p>Similar to H.R. 3221, but would require the establishment of at least 11 bioresearch centers focused on biofuels. [Sec. 123]</p>	<p>No comparable provision.</p>	<p>No comparable provision.</p>	<p>See also Sec. 4413(a) of H.R. 3221 (below), which would expand the topics covered by the program.</p>

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Grants for Biofuel Production and R&D in Certain States	The Secretary of Energy is authorized to receive \$25 million annually for FY2006-FY2010 for R&D and implementation of renewable fuel production technologies in states with low rates of ethanol production that are under the federal reformulated gasoline (RFG) program. [P.L. 109-58, Sec. 1511(d)]	Authorizes \$25 million annually for FY2008-FY2010 for R&D and commercial application of biofuel production in states with low rates of ethanol and cellulosic ethanol production (this could in effect apply to all states). [Sec. 4407]	Similar to H.R. 3221. [Sec. 125]	No comparable provision.	No comparable provision.	The funding authorized in these bills would be in addition to amounts in current law. Language substantially similar to these bill sections is also in Sec. 9315 of H.R. 3221(see below).
Biorefinery Energy Efficiency	The Secretary of Energy is directed to conduct research on commercial applications of biomass and bioenergy. [P.L. 109-58, Sec. 932]	Amends Sec. 932 of P.L. 109-58 to include research on energy efficiency at biorefineries and on technology to convert existing corn-based ethanol plants to process cellulosic materials. [Sec. 4408]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Study of Increased Consumption of Ethanol-Blended Gasoline with Higher Levels of Ethanol	No current provision.	The Secretary of Energy is directed to study the potential for using ethanol/gasoline blends in the range of 10% to 40% ethanol. Currently, only up to 10% ethanol is permitted by federal regulations and warranted by automakers for conventional vehicles. [Sec. 4409]	Similar provision. [Sec. 142]	No comparable provision.	No comparable provision.	A similar provision is contained in Sec. 9305 of H.R. 3221 for a study of increasing gasoline ethanol content above 10% (see below).
Study of Optimization of Flexible Fueled Vehicles to use E-85 Fuel	No current provision.	The Secretary of Energy is directed to study whether optimizing flexible fuel vehicles (FFVs) to run on E85 would increase their fuel efficiency. [Sec. 4410]	Similar provision. [Sec. 144]	No comparable provision.	No comparable provision.	Current FFVs are optimized to run on gasoline, since that tends to be their primary fuel.
Study of Engine Durability and Performance Associated with the Use of Biodiesel	No current provision.	The Secretary of Energy is directed to study the effects of various biodiesel/diesel blends on engine performance and durability. [Sec. 4411]	Similar provision, except that the Secretary is required to study only the effects on engine durability but not performance. [Sec. 146]	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Bioenergy R&D - Authorization of Appropriation	The Secretary of Energy is directed to conduct R&D on biomass, bioenergy, and bioproducts. A total of \$525 million is authorized for FY2008-FY2009. [P.L. 109-58, Sec. 931(c)]	Amends Sec. 931 of P.L. 109-58 to authorize a total of \$1.2 billion for FY2008-FY2010 for R&D on biomass, bioenergy, and bioproducts. [Sec. 4412]	Amends Sec. 931 of P.L. 109-58 to authorize a total of \$775 million for FY2008-FY2009. [Sec. 122]	No comparable provision.	No comparable provision.	Funding for related biomass research through the Department of Agriculture is contained in Sec. 5007 of H.R. 3221.
Environmental Research and Development	DOE is required to establish a program of research, development, and demonstration in microbial and plant systems biology, protein science, and computational biology. Biomedical research and research related to humans are not permitted as part of the program. [P.L. 109-58, Sec. 977]	DOE is required to expand the biological R&D program established in Sec. 977 of P.L. 109-58 to include environmental effects, potential for greenhouse gas reductions, and the potential for more sustainable agriculture. [Sec. 4413(a)]	No comparable provision.	No comparable provision.	No comparable provision.	See also Sec. 4406 of H.R. 3221 (above).

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Lifecycle Analysis Tools for Evaluating the Energy Consumption and Greenhouse Gas Emissions from Biofuels	No current provision.	The Secretary of Energy is required to study and develop tools for evaluating the lifecycle energy consumption and greenhouse gas emissions related to the production and use of biofuels. [Sec. 4413(b)]	Similar provision, but the study is required to cover only greenhouse gas emissions but not energy consumption. [Sec. 148]	No comparable provision.	USDA is directed to study methods for evaluating the life-cycle greenhouse gas emissions of conventional fuels and biofuels, and to report to Congress results and recommendations for a method for evaluating the lifecycle greenhouse gas emissions of fuels. [Sec. 9019]	
Small-Scale Production and Use of Biofuels	No current provision.	The Secretary of Energy is required to establish an R&D program to facilitate small-scale production and local and on-farm use of biofuels. [Sec. 4413(c)]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Study of Optimization of Biogas Used in Natural Gas Vehicles	No current provision.	The Secretary of Energy is directed to study the potential for optimizing natural gas vehicles to run on biogas (methane produced from biological feedstocks). [Sec. 4414]	No comparable provision.	No comparable provision.	No comparable provision.	
Standards for Biofuels Dispensers	No current provision.	If “appropriate private standards” for biofuels dispensers have not been developed by the date of enactment, the Secretary of Energy is required to develop such standards to promote broader biofuel use. [Sec. 4415]	No comparable provision.	No comparable provision.	No comparable provision.	
Algal Biomass	Various statutes promote biofuels R&D, including the development of biofuels from algae, at the Department of Energy.	The Secretary is required to report to Congress on progress toward developing algae as a feedstock for biofuel production. [Sec. 4416]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221, Title V — Agriculture Energy						
Federal Procurement of Biobased Products	Under the 2002 Farm Bill, federal agencies are currently required to purchase biobased products under certain conditions. Current law authorizes 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 Commodity Credit Corporation (CCC) funding of \$1 million is authorized for each of FY2002-FY2007 for testing biobased products. [P.L. 107-171, Sec. 9002]	Amends definitions and procedures for determining eligibility of products under the 2002 Farm Bill (P.L. 107-171) program on federal procurement of biobased products. Clarifies that products with at least 5% of intermediate ingredients and feedstock that are biobased should be considered under the preference. For FY2008-FY2012, \$2 million in annual mandatory CCC funding is provided for product testing. [Sec. 5002]	No comparable provision.	Similar to H.R. 3221, except 1) also requires USDA to complete rulemaking on labeling regulation; 2) provides mandatory CCC funding of \$2 million for each of FY2008-FY2012 for bio-product testing, labeling, and procurement research, promotion, and awareness initiatives. [Sec. 9002]	Clarifies that biobased intermediate ingredients and feedstocks qualify under the program. It also requires the Secretary of Agriculture to establish a voluntary labeling program for biobased products — “USDA Certified Biobased Product.” Provides grants for education and awareness of bioenergy and biobased products. Provides \$3 million per year in mandatory funding for FY2008-FY2012. [Sec. 9003]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Loan Guarantees and Grants for Biorefineries and Biofuel Production Plants</p>	<p>The Energy Policy Act of 2005 directs DOE to provide loan guarantees for various renewable energy and low-emission energy projects. [P.L. 109-58, Sec. 1703]</p> <p>The 2002 Farm Bill authorized 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. However, no funds have been appropriated for the program. [P.L. 107-171, Sec. 9003]</p>	<p>Extends the 2002 Farm Bill biorefinery development program through FY2012 and provides new loan guarantee authority for biorefineries, with a total of \$600 million going to loans less than \$100 million, and \$1 billion 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. Specifies mandatory CCC funding of \$640 million total for FY2008-FY2012. [Sec. 5003]</p>	<p>Amends Sec. 1703 of the Energy Policy Act of 2005 to allow for projects that produce “advanced biofuels” defined as biofuels produced from feedstocks other than corn starch (see H.R. 6, Sec. 111). [Sec. 124]</p>	<p>Similar to H.R. 3221, except that at total of \$800 million in mandatory funding is provided. [Sec. 9003]</p>	<p>Revises P.L. 107-171, Sec. 9003, to promote “advanced biofuel” production in renewable-fuel-powered facilities. Provides grants for pilot- and demonstration-scale plants; matching funds for feasibility studies, and grants for up to 20% of total costs to convert fossil-fueled biomass facilities to renewable resources; and provides loan guarantees for up to 80% of total eligible costs for the development and construction of commercial-scale plants. Provides \$300 million in mandatory funding for FY2008-FY2012. [Sec. 9005]</p>	<p>See also H.R. 3221, Sec. 9308 (below).</p>

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Biodiesel Fuel Education Program	This program awards competitive grants to nonprofit organizations that educate governmental and private entities operating vehicle fleets, and educate the public about the benefits of biodiesel fuel use. Mandatory CCC funding of \$1 million annually was authorized for FY2003-FY2007. [P.L. 107-171, Sec. 9004]	Extends the 2002 Farm Bill Biodiesel Fuel Education Program through FY2012 with mandatory funding of \$2 million for each of FY2008-FY2012. [Sec. 5004]	No comparable provision.	Identical provision to H.R. 3221. [Sec. 9017]	Identical provision to H.R. 3221. [Sec. 9003]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Energy Audit and Renewable Energy Development Program	This is a competitive grant program for eligible entities to carry out a program to assist farmers, ranchers, and rural small businesses 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 FY2002-FY2007. [P.L. 107-171, Sec. 9005]	Extends the 2002 Farm Bill Energy Audit and Renewable Energy Development Program through 2012. [Sec. 5005]	No comparable provision.	Identical provision to H.R. 3221. [Sec. 9004]	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 next section for more information). [Sec. 9007]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Renewable Energy Systems and Energy Efficiency Improvements	This program 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. Mandatory CCC funding of \$23 million annually for FY2003-FY2007. [P.L. 107-171, Sec. 9006]	Renames the 2002 Farm Bill program on “renewable energy systems and energy efficiency improvements” as the “Rural Energy for America Program.” Raises the loan guarantee level from \$10 million to \$25 million and caps federal cost-share at 75%. Allows for feasibility studies to be eligible for the program. Increases mandatory CCC funding to a total of \$425 million for FY2008-FY2012. [Sec. 5006]	No comparable provision.	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 a total of \$500 million for FY2008-FY2012. [Sec. 9005]	Renamed as the “Rural Energy for America Program,” 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. Sets aside a portion of funds for manure-to-energy facilities such as methane digesters. Streamlines grant and loan applications for small-scale projects (under \$20,000), and requires that 20% of funds be used for such projects. ... continued	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
					<p>Extends EPA's Energy Star Program to identify and promote energy-efficient equipment and facilities in the agricultural sector.</p> <p>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. [Sec. 9007]</p>	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Biomass Research and Development Act of 2000</p>	<p>The Biomass Research and Development Act of 2000 (reauthorized by the 2002 Farm Bill) provides competitive funding for R&D 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 annually for FY2003- FY2007 to remain available until expended. Also authorized appropriations of \$200 million for each of FY2006-FY2015. [P.L. 107-171, Sec. 9008]</p>	<p>Modifies and extends the Biomass Research and Development Program through FY2012. Adds mandatory CCC funding of \$350 million total for FY2008-FY2012. Also maintains the existing authorization of appropriations of \$200 million annually for FY2008-FY2015. [Sec. 5007]</p>	<p>No comparable provision.</p>	<p>Similar to H.R. 3221, except that a total of \$420 million in mandatory funding is provided for FY2008-FY2012, in addition to the \$200 million annual authorization. [Sec. 9006]</p>	<p>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. Provides a total of \$75 million in mandatory funding during FY2008-FY2012. Authorizes appropriations of \$85 million in each of FY2008-FY2012. [Sec. 9008]</p>	<p>See also Senate Agriculture Committee Farm Bill, Sec. 9012.</p>

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Adjustments to the Bioenergy Program</p>	<p>Originally a Clinton Administration initiative, the Bioenergy Program was made statutory by the 2002 Farm Bill. The 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 annually for FY2002-FY2006. No funding was available for FY2007. [P.L. 107-171, Sec. 9010]</p>	<p>Renews and extends the 2002 Farm Bill Bioenergy Program through 2012 with a total of \$1.215 billion in mandatory CCC funding for FY2008-FY2012. Ethanol produced from corn starch is excluded. Renewable diesel produced from biomass at petroleum refineries may be excluded, as well. Expands eligibility for combined heat and power production using biomass at biofuels plants and biomass gasification as types of bioenergy eligible for the production incentive. [Sec. 5008]</p>	<p>No comparable provision.</p>	<p>Similar to H.R. 3221, except that a total of \$1.4 billion in mandatory funding is provided for FY2008-FY2102. [Sec. 9007]</p>	<p>Renews and extends the Bioenergy Program through FY2012. Bases the payment rate on: (1) biofuel production, (2) feedstock prices, and (3) net non-renewable energy content of the fuel. The program is not available to those claiming a biofuel production tax credit or with biofuel production capacity greater than 150 million gallons per year. Provides \$245 million in mandatory funding for FY2008-FY2012. [Sec. 9006]</p>	<p>The S. 2302 provisions will likely benefit those purchasing feedstocks for cellulosic biofuels and biodiesel.</p>

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Research, Extension, and Educational Programs on Biobased Energy Technologies and Products	<p>The “Sun Grant” program established 5 national sun grant research centers based at land-grant universities and each covering a different 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. Authorized appropriations of \$25 million in FY2005, \$50 million in FY2006, and \$75 million annually for FY2007-FY2010.</p>	<p>Extends the Sun Grant program through 2012 with authorized appropriations of \$75 million for each of FY2008-FY2012. [Sec. 5009]</p>	<p>No comparable provision.</p>	<p>Extends the Sun Grant program through 2012 with authorized appropriations of \$75 million for each of FY2008-FY2012, and establishes a 6th regional center — Western Insular Pacific Sub-Center — at the University of Hawaii. [Sec. 9008]</p>	<p>Reauthorizes the Sun Grant program through FY2012 and establishes a Western Insular Pacific Sub-Center at the University of Hawaii. Competitive grants are available to land-grant schools within each region. 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-FY2012. Further authorizes appropriations of \$70 million in each of FY2008-FY2015. [Sec. 9009]</p>	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Energy Council of the Department of Agriculture	No current provision.	Directs the Secretary of Agriculture to establish an energy council to coordinate the energy policy of USDA and consult with other federal departments and agencies. [Sec. 5010]	No comparable provision.	Identical to H.R. 3221. [Sec. 9009]	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 oversight and coordination of energy-related activities within USDA, as well as coordination of related activities with other federal, state, and local agencies. [Sec. 9016]	

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Forest Bioenergy Research Program	No current provision.	Establishes a new R&D program to promote the use of woody biomass for bioenergy production, including addressing feedstock issues such as yield and new varieties. A total of \$36 million in mandatory CCC funding is provided for FY2008-FY2012. [Sec. 5011]	No comparable provision.	Similar to H.R. 3221, except that a total of \$75 million in mandatory funding is provided for FY2008-FY2102. [Sec. 9019]	Similar to H.R. 3221, except that discretionary (not mandatory) funding is authorized at \$5 million for each of FY2008-FY2012. [Sec. 2012]	
Feedstock Flexibility Program for Bioenergy Producers	No current provision.	Requires that USDA establish and administer (starting in FY2008) a sugar-for-ethanol program using sugar intended for food use but deemed by USDA to be in surplus. USDA would implement the program only in those years when purchases are determined to be necessary to ensure that the sugar program operates at no cost. Such sums as are necessary to carry out the program are authorized. [Sec. 5012]	No comparable provision.	Substantially similar to H.R. 3221. [Sec. 9013]	Substantially similar to H.R. 3221. [Sec. 1501(f)]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221, Title VIII — Transportation and Infrastructure						
Capitol Complex E-85 Refueling Station	No current provision.	The Architect of the Capitol is authorized to install an E85 tank and pumping system on or near the Capitol Grounds Fuel Station. [Sec. 8652]	No comparable provision.	No comparable provision.	No comparable provision.	
H.R. 3221, Title IX — Energy and Commerce						
Renewable Fuel Infrastructure Development	No current provision.	Establishes a grant program for the installation of refueling infrastructure for E85 and B20 (20% biodiesel, 80% conventional diesel) fuels. Authorizes \$200 million annually for FY2008-FY2014. “Large, vertically integrated oil companies” are ineligible for funding. [Sec. 9301]	No comparable provision.	No comparable provision.	Provides cost-share grants of up to 20% of total costs for installation of E-85 fuel infrastructure. Authorizes a total of \$20 million for FY2008-FY2012 to remain available until expended. [Sec. 9020]	See also Sec. 4403 of H.R. 3221 (above).

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Prohibition on Franchise Agreement Restrictions Related to Renewable Fuel Infrastructure	No current provision.	Amends the Petroleum Marketing Practices Act (15 U.S.C. 2801 et seq.) to make it unlawful for a franchiser to prohibit a franchisee from installing E85 or B20 tanks and pumps within the franchise agreement. [Sec. 9302]	No comparable provision.	No comparable provision.	No comparable provision.	
Renewable Fuel Dispenser Requirements - Report to Congress	No current provision.	The Secretary of Energy is required to report to Congress on the market penetration of flexible fuel vehicles and on the feasibility of requiring fuel retailers to install E85 infrastructure. [Sec. 9303]	No comparable provision.	No comparable provision.	No comparable provision.	
Pipeline Feasibility Study	No current provision.	The Secretary of Energy, in consultation with the Secretary of Transportation, is required to report on the feasibility of constructing dedicated ethanol pipelines. [Sec. 9304]	Substantially similar, except that the Secretary of Energy must consult with the Secretary of Agriculture, as well. [Sec. 143]	No comparable provision.	USDA is required to study the infrastructure needs associated with an expansion in biofuel production, including pipeline feasibility. [Sec. 9017]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Study of Ethanol-Blended Gasoline with Greater Levels of Ethanol	No current provision.	The Secretary of Energy is directed to study the potential for increasing the ethanol content in gasoline above 10%. [Sec. 9305]	Similar provision, except that the study is to cover ethanol/gasoline blends between 10% and 40% ethanol. [Sec. 142]	No comparable provision.	No comparable provision.	A similar provision to Sec. 142 of H.R. 6 is contained in Sec. 4409 of H.R. 3221 (see above).
Study of the Adequacy of Railroad Transportation of Domestically-Produced Renewable Fuel	No current provision.	The Secretary of Energy, in consultation with the Secretary of Transportation, is required to study and report on the adequacy of railroad transportation of domestically produced renewable fuel. [Sec. 9306]	No comparable provision.	The Secretary of Agriculture, in coordination with the Secretary of Transportation, is required to study and report on railroad issues related to the movement of agricultural products, including domestically produced renewable fuels. [Sec. 6032]	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Standard Specifications for Biodiesel	No current provision.	If ASTM International (originally the American Society for Testing and Materials) has not adopted a standard for B20 within one year of enactment, the Administrator of the Environmental Protection Agency (EPA) is required to do so. No new funding is authorized. [Sec. 9307]	The President is required to promulgate rules to ensure that renewable diesel fuel substitutes comply with applicable ASTM standards. Authorizes \$3 million annually for FY2008-FY2010. [Sec. 130(c)]	No comparable provision.	No comparable provision.	
Grants for Cellulosic Ethanol Production	The Secretary of Energy may provide grants for the construction of facilities to produce renewable fuels (including ethanol) from cellulosic biomass, agricultural byproducts, agricultural waste, and municipal solid waste. A total of \$750 million is authorized for FY2006-FY2008. [P.L. 109-58, Sec. 1512]	Extends the program of construction grants for cellulosic biofuel facilities established in P.L. 109-58 through FY2010 and authorizes \$500 million annually for FY2009 and FY2010. Directs the Secretary of Energy to give priority to projects that “promote feedstock diversity and geographic dispersion of production facilities.” [Sec. 9308]	No comparable provision.	No comparable provision.	No comparable provision.	See also H.R. 3221, Sec. 5003 (above).

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Consumer Education Campaign Relating to Flexible-Fuel Vehicles	No current provision.	The Secretary of Transportation is required to carry out an educational program to inform consumers about flexible fuel vehicles, including which existing vehicles may be fueled on E85. [Sec. 9309]	No comparable provision.	No comparable provision.	No comparable provision.	
Review of New Renewable Fuels or New Renewable Fuel Additives	Under Sec. 211(f) of the Clean Air Act, no new fuels or fuel additives may be introduced into commerce unless granted a waiver by EPA. If EPA has not acted within 180 days of receipt of a waiver request, the waiver is treated as granted. [42 U.S.C. 7545(f)]	Amends the Clean Air Act to prohibit the introduction of new renewable fuels or renewable fuel additives unless EPA explicitly grants a waiver under Sec. 211(f) of the Clean Air Act. EPA is required to take final action within 270 days of receipt of the waiver request. [Sec. 9310]	No comparable provision.	No comparable provision.	No comparable provision.	Currently, inaction or failure to complete review of an additive by EPA allows a fuel to receive the waiver. Under H.R. 3221, no waiver would be granted without <i>explicit</i> approval by EPA.

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Domestic Manufacturing Conversion Grant Program	The EPA Administrator is required to establish a program to encourage the domestic production and sales of efficient hybrid and advanced diesel vehicles. The program must include grants to domestic vehicle manufacturers to encourage production and provide consumer purchase incentives. Such sums as necessary are authorized for FY2006-FY2015. [P.L. 109-58, Sec. 712]	Expands the incentive program for the domestic production of hybrid and advanced diesel vehicles established in P.L. 109-58 to include flexible fuel vehicles. Requires that priority be given to auto and parts manufacturing facilities that have “recently ceased operation or will cease operation in the near future.” Allows coordination with similar state programs. [Sec. 9311]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Cellulosic Ethanol and Biofuels Research	No current provision.	Authorizes the Secretary of Energy to provide biofuels R&D grants to 10 institutions from land-grant colleges, Historically Black Colleges or Universities, tribal serving institutions, or Hispanic serving institutions. \$50 million for FY2008 is authorized to be appropriated, to be available until expended. [Sec. 9312]	No comparable provision.	No comparable provision.	No comparable provision.	
Federal Fleet Refueling Centers	No current provision.	Requires the head of each federal agency to install at least one renewable fuel pump at each federal fleet refueling center by January 1, 2010. [Sec. 9313]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Study of Impact of Increased Renewable Fuel Use</p>	<p>By August 2009, EPA must publish a draft analysis of the effects of the fuels provisions in P.L. 109-58 on air pollutant emissions and air quality. [P.L. 109-58, Sec. 1505]</p> <p>EPA is required to conduct a survey to determine the market share of gasoline containing ethanol and other renewable fuels. [P.L. 109-58, Sec. 1501(c)]</p> <p>DOE is required to collect and publish monthly survey data on the production, blending, importing, demand, and price of renewable fuels, both on a national and regional basis. [P.L. 109-58, Sec.</p>	<p>The Secretary of Energy, in consultation with the EPA Administrator, the Administrator of the Energy Information Administration (EIA), and the Secretary of Agriculture, is required to study and assess the impact of renewable fuels on the U.S. economy. Study elements include the effects on energy security, air and water quality, infrastructure, job creation, and agricultural commodity markets. The Secretary must report within two years of enactment and update the report every three years thereafter. [Sec. 9314]</p>	<p>The EPA Administrator is required to enter into an agreement with the National Academy of Sciences to study the effects on the environment from increased renewable fuel use. Study elements include the effects on air and water quality, land use patterns, deforestation, greenhouse gas emissions, habitat, and the long-term capacity of the United States to produce biomass feedstocks. The Administrator must submit two reports: 1) within three years of enactment; and 2) by December 31, 2015. [Sec. 162]</p>	<p>No comparable provision.</p>	<p>No comparable provision.</p>	<p>See also Sec. 14002 of H.R. 3221, which would require the Secretary of the Treasury to study related topics.</p>

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Grants for Renewable Fuel Production R&D in Certain States	The Secretary of Energy is authorized to conduct R&D and deployment of renewable fuel production technologies in certain states. [P.L. 109-58, Sec. 1511(d)]	Authorizes \$25 million annually for FY2008-FY2010 for research, development, and commercial application of biofuel production in states with low rates of ethanol and cellulosic ethanol production. [Sec. 9315]	Similar to H.R. 3221. [Sec. 125]	No comparable provision.	No comparable provision.	For more information, see Sec. 4407 of H.R. 3221 (above).
Study of Effect of Oil Prices	No current provision.	The Secretary of Energy is required to study the effects on renewable fuel production of oil priced at \$40 a barrel or more. [Sec. 9316]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Biodiesel as Alternative fuel for CAFE Purposes	Under the Corporate Average Fuel Economy (CAFE) program, automakers may generate credits toward their compliance for the production and sale of alternative fuel vehicles, as defined in law. Currently, B20 vehicles are not considered alternative fuel vehicles. [49 U.S.C. 32901 et seq.]	Amends the Corporate Average Fuel Economy (CAFE) program to allow vehicles capable of operating on B20 to be treated as alternative fuel vehicles eligible for CAFE credits. [Sec. 9317]	No comparable provision.	No comparable provision.	No comparable provision.	Expanding the definition of alternative fuel vehicle to include B20 could make all diesel passenger cars and light trucks eligible for credits under CAFE. Currently, some diesel passenger vehicles are warranted to run on B5, but there seem to be few technical barriers to making some or all new diesel vehicles B20-capable.

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221 Tax Provisions, Title XII — Conservation						
Extension and Modification of Alternative Fuel Vehicle Refueling Property Credit	An owner of a retail fuel station may take a tax credit for the installation of alternative fuel tanks and pumps. The credit is equal to 30% of the cost of the installation, up to \$30,000. For alternative fuels other than hydrogen, the credit expires on December 31, 2009. [P.L. 109-58, Sec. 1342]	Increases the alternative fuel refueling property credit to 50% of the cost of the installation, up to \$50,000. Extends the credit for fuels other than hydrogen through December 31, 2010. [Sec. 12002]	No comparable provision.	No comparable provision.	Extends the alternative fuel refueling property credit through December 31, 2010 for fuels other than hydrogen, but does not increase its value. [S. 2242, Sec. 332]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Extension and Modification of Credits for Biodiesel and Renewable Diesel	A tax credit is available for the retail sale or use of biodiesel and renewable diesel. The credit is equal to \$1.00 per gallon for renewable diesel or biodiesel produced from virgin agricultural products. The credit expires on December 31, 2008. [P.L. 108-357, P.L. 109-58]	Amends the definition of “renewable diesel” under the renewable diesel tax credit to exclude renewable diesel and renewable diesel mixtures produced through certain processes. Extends the tax credits through December 31, 2010. [Sec. 12003]	No comparable provision.	No comparable provision.	Extends the biodiesel tax credit through December 31, 2010, and the small agri-biodiesel producer tax credit through December 31, 2012. Further, the amount of biodiesel coprocessed with petroleum eligible for the credit is limited to 60 million gallons. [Sec. 321]	Also see Sec. 13011 of H.R. 3221 below. The modification in H.R. 3221 is presumably to limit the amount of credit claimed for renewable diesel produced at existing petroleum refineries.

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Tax Credit for Production of Cellulosic Alcohol	All fuel ethanol is allowed a tax credit of \$0.54 per gallon, regardless of feedstock. Small producers may claim an additional credit of \$0.10 per gallon. [26 U.S.C. 40]	Establishes a credit of \$0.50 per gallon for ethanol produced from cellulosic materials, in addition to any existing credits. [Sec. 12004]	No comparable provision.	No comparable provision.	Establishes a credit for small producers of cellulosic biomass alcohol through April 1, 2015. The value of the credit, plus the existing small ethanol producer credit and alcohol fuels credits can not exceed \$1.28 per gallon. Currently, the credit would be worth \$0.58 per gallon, but would increase as the other credits decrease or phase out. [S. 2242, Sec. 312]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221 Tax Provisions, Title XIII — Revenue Provisions						
Clarification of Eligibility for Renewable Diesel Tax Credit	A tax credit is available for the retail sale or use (by producers) of renewable diesel. The credit is equal to \$1.00 per gallon of renewable diesel. [P.L. 109-58]	Explicitly excludes fuels “derived from coprocessing biomass with a feedstock which is not biomass” from eligibility for the renewable diesel tax credit. [Sec. 13011]	No comparable provision.	No comparable provision.	The amount of biodiesel coprocessed with petroleum eligible for the credit is limited to 60 million gallons. [Sec. 321]	The H.R. 3221 provision would limit or prohibit tax credits for production of renewable diesel at existing petroleum refineries.
Clarification That Tax Credits or Fuel are Designed to Provide an Incentive for United States Production	A tax credit is available for the retail sale or use of biodiesel and renewable diesel blended into conventional diesel. The credit does not recognize point of origin. [P.L. 108-357, P.L. 109-58]	Limits eligibility for the biodiesel and renewable diesel tax credits to fuels produced in the United States. [Sec. 13012]	No comparable provision.	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 3221 Tax Provisions, Title XIV — Other Provisions						
Comprehensive Study of Biofuels	No current provision.	The Secretary of the Treasury is required to study the effects of increased biofuel use. Study elements include the effects on: fuel prices; land prices; land use; environment; agricultural commodities; taxpayers; and refining capacity. [Sec. 14002]	No comparable requirement for the Secretary of the Treasury.	No comparable provision.	No comparable provision.	Both energy bills would require related studies by DOE or EPA. See Sec. 9314 of H.R. 3221 and Sec.162 of H.R. 6 (above).

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
H.R. 6 (Senate Version)						
Renewable Fuel Standard	The Energy Policy Act of 2005 established an RFS which requires the use of an increasing amount of renewable fuels in gasoline. The mandate increases from 4.0 billion gallons in 2006 to 7.5 billion gallons in 2012. Starting in 2013, the proportion of renewable fuel to gasoline must equal or exceed the proportion in 2012. Starting in 2013, of the amount mandated above, at least 250 million gallons must be fuel derived from cellulosic material. [P.L. 109-58, Sec. 1501]	No comparable provision.	Amends the RFS to include all motor fuel, as well as heating oil. Expands the mandate to 13.2 billion gallons in 2012 and 36 billion gallons in 2022. Starting in 2016, requires an increasing amount of the above mandate to be met using “advanced biofuels,” defined as biofuels derived from feedstocks other than corn starch. The bill would require 3 billion gallons of advanced biofuel in 2016, increasing to 21 billion gallons in 2022. Renewable fuels produced in facilities that commence operation after enactment must achieve at least a 20% reduction in lifecycle greenhouse gas emissions relative to gasoline. [Sec. 111]	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Production of Renewable Fuel Using Renewable Energy	Under the existing RFS, cellulosic biofuels are eligible for additional credits under the mandate. A gallon of cellulosic biofuel is considered equal to 2.5 gallons of ethanol. For this section, “cellulosic biofuels” includes both biofuels produced from cellulose and biofuels produced from sugars or starches (e.g., corn ethanol) if biomass is used to displace fossil energy in the refining of the fuel. [P.L. 109-58, Sec. 1501]	No comparable provision.	Under Sec. 111 of H.R. 6, a gallon of advanced biofuel is considered equal to a gallon of conventional biofuel. This section grants the President the authority to give additional tax credits under the program to biofuels produced at facilities that use biomass to displace fossil energy. [Sec. 112]	No comparable provision.	Authorizes USDA to provide cost-sharing grants and loan guarantees available for repowering existing biorefineries operating on fossil fuels to switch to renewable energy. (For more information, see “Loan Guarantees and Grants for Biorefineries and Biofuel Production Plants” above - p. 13.) [Sec. 9005]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Sense of Congress Relating to the Use of Renewable Resources to Generate Energy	No current provision.	No comparable provision.	Expresses the Sense of the Congress that renewable resources from agriculture and forestry should provide at least 25% of all U.S. energy needs by 2025. [Sec. 113]	Expresses the Sense of the Congress that it is in the interest of the United States to diversify its energy portfolio and promote energy security through renewable energy. [Sec. 9016]	Sense of Congress encouraging higher levels of ethanol-blended gasoline (i.e., intermediate blends such as E13, E15, E20 and higher). [Sec. 9002]	
Grants for Infrastructure for Transportation of Biomass to Local Biorefineries	No current provision.	No comparable provision.	Requires the Secretary of Energy to make grants to local governments and other entities (as determined by the Secretary) to promote the development of infrastructure to produce, separate, process, and transport biomass to biorefineries. [Sec. 126]	Allows the Secretary of Agriculture to provide matching payments for the collection, harvesting, storage and transport of biomass to biorefineries. The Secretary may match payments by biorefineries dollar-for-dollar up to \$45 per ton. [Sec. 9018(m)]	Requires the Secretary to provide payments for the collection, harvesting, storage and transport of biomass to biorefineries. A fixed rate per ton would be determined by the Secretary. [Sec. 9004(d)]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Alternative Fuel Database and Materials	No current provision.	No comparable provision.	Requires the Secretary of Energy and the National Institute of Standards and Technology to establish: 1) a public database describing the physical properties of different alternative fuels; and 2) standard reference materials for different alternative fuels. [Sec. 128]	As part of new Biomass Energy Reserve program (see next page), participants are required to submit relevant information to the Secretary of Agriculture for inclusion in a public best practices database. [Sec. 9018(1)]	Similar provision to H.R. 2419. [Sec. 9004(e)]	
Fuel Tank Labeling Requirement	No current provision.	No comparable provision.	Beginning in model year 2010, would require that the fuel tank cap of an alternative fuel vehicle be clearly labeled as such. [Sec. 129]	No comparable provision.	No comparable provision.	
Biodiesel Labeling Standards	No current provision.	No comparable provision.	Requires the President to promulgate rules for the uniform labeling of biodiesel blends that meet ASTM International (formerly the American Society for Testing and Materials) standards. [Sec. 130(b)]	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
<p>Financial Assistance for the Production of Biomass Energy Crops</p>	<p>No current provision.</p>	<p>No comparable provision.</p>	<p>Requires the Secretary of Agriculture to provide transitional assistance payments to agricultural producers in the first year they produce eligible cellulosic energy crops. \$4 million is authorized annually for FY2008-FY2012. [Sec. 131]</p>	<p>Establishes a new Biomass Energy Reserve (BER). 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. BER projects would have to be within a 50-mile radius of a bioenergy facility. Authorizes mandatory funding of such sums as are necessary. [Sec. 9018]</p>	<p>Creates the Biomass Crop Transition Program to stimulate production of biomass crops. USDA provides 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-FY2012 to support biomass production. [Sec. 9004]</p>	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
R&D in Support of Low-Carbon Fuels	No current provision.	No comparable provision.	Establishes a program of R&D grants for research on low carbon fuels, including cellulosic biofuels and woody biomass for fuels and electricity. A total of \$275 million is authorized for FY2009-FY2013. [Sec. 132]	No comparable provision.	No comparable provision.	
Study of Advanced Biofuels Technologies	No current provision.	No comparable provision.	Requires the Secretary of Energy to contract with the National Academy of Sciences to study technologies for the production, transportation, and distribution of "advanced biofuels." [Sec. 141]	No comparable provision.	No comparable provision.	Advanced biofuels are biofuels produced from feedstocks other than corn starch. (See Sec. 111 of H.R. 6 above.)

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Study of Incentives for Renewable Fuels	No current provision.	No comparable provision.	Requires the President to study the renewable fuels industry and markets to determine production costs, factors affecting market prices, and financial incentives necessary to enhance the U.S. biofuels industry. [Sec. 147]	No comparable provision.	No comparable provision.	
Study of Effects of Ethanol-Blended Gasoline on Off-Road Vehicles	No current provision.	No comparable provision.	Requires the Secretary of Energy to study the effects of ethanol-blended gasoline on off-road vehicles and recreational boats. [Sec. 149]	No comparable provision.	No comparable provision.	
Grants for Production of Advanced Biofuels	No current provision.	No comparable provision.	Requires the Secretary of Energy to establish a grant program for the production of advanced biofuels that have at least a 50% reduction in lifecycle greenhouse gas emissions relative to current fuels. [Sec. 161]	No comparable provision.	No comparable provision.	Advanced biofuels are biofuels produced from feedstocks other than corn starch. (See Sec. 111 of H.R. 6.)

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Integrated Consideration of Water Quality in Determinations on Fuels and Fuel Additives	Section 211(c) of the Clean Air Act allows the EPA Administrator to control or prohibit the production and/or sale of any engine, vehicle, fuel, or fuel additive that causes or contributes to air pollution “that may be reasonably anticipated to endanger the public health or welfare.” [42 U.S.C. 7545(c)]	No comparable provision.	Expands EPA’s authority to control engines, vehicles, fuels, and fuel additives under Sec. 211(c) of the Clean Air Act to include effects on water pollution. [Sec. 163]	No comparable provision.	No comparable provision.	
Anti-Backsliding	No current provision.	No comparable provision.	Requires the EPA Administrator to study the potential adverse effects to air quality from the expanded RFS (see “Renewable Fuel Standard” - H.R. 6, Sec. 111), and to promulgate regulations to mitigate those effects. [Sec. 164]	No comparable provision.	No comparable provision.	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Alternative Fuel Vehicle Action Plan	No current provision.	No comparable provision.	Requires the Secretary of Transportation to develop and implement an action plan so that alternative fuel vehicles (including E85 vehicles) represent at least 50% of new vehicle sales nationwide by 2015. [Sec. 520]	No comparable provision.	No comparable provision.	
H.R. 2419 - House Farm Bill						
Farm Energy Production and Use Pilot Program	No current provision.	No comparable provision.	No comparable provision.	Establishes a pilot program to provide grants to farmers to demonstrate the feasibility of making a farm become energy neutral using existing technologies. Authorizes a total of \$5 million for FY2008-FY2012. [Sec. 9010]	No comparable provision.	See also H.R. 2419, Sec. 9015 (below).

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Rural Energy Self-Sufficiency Initiative Grant Program	No current provision.	No comparable provision.	No comparable provision.	Establishes the Rural Energy Self-Sufficiency Initiative to provide 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-FY2012. [Sec. 9011]	Establishes a program — the Rural Energy Systems Renewal Program — of competitive cost-shared grants for rural communities to assess their energy systems and formulate strategies for improvements. Authorizes discretionary funding of \$5 million for each of FY2008-FY2012. [Sec. 9014]	

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Agricultural Biofuels from Biomass Internship Program	No current provision.	No comparable provision.	No comparable provision.	Provides 3rd and 4th year undergraduate or graduate students from universities in states with substantial farm-based economies the opportunity to work with U.S. government and non-governmental organizations on matters pertaining to renewable energy policies. Requires states to match \$1 for every \$2 of federal funds. Authorizes such sums as are necessary to carry out the program. [Sec. 9012]	No comparable provision.	
Biomass Inventory Report	No current provision.	No comparable provision.	No comparable provision.	Instructs USDA to conduct a national inventory of biomass resources on a county-by-county basis. [Sec. 9014]	No comparable provision.	

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Future Farmsteads Program	No current provision.	No comparable provision.	No comparable provision.	Establishes a program to equip farm entities (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 such sums as are necessary to carry out the program. [Sec. 9015]	Identical provision. [Sec. 9023]	See also H.R. 2419, Sec. 9010 (above).

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Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Community Wood Energy R&D Program	No current provision.	No comparable provision.	No comparable provision.	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-FY2012. [Sec. 9019]	Substantially similar to H.R. 2419, except that \$5 million annually is authorized (not mandatory) for FY2008-FY21012. [Sec. 9013]	
Supplementing Corn as an Ethanol Feedstock	No current provision.	No comparable provision.	No comparable provision.	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 funding of \$20 million. [Sec. 9020]	No comparable provision.	

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S. 2302 - Senate Farm Bill						
Regional Biomass Crop Experiments	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Provides competitive grants to land-grant universities to establish regional bioenergy crop research experiments. Crop experiments are to include all appropriate biomass plant species, including perennials, annuals, and woody biomass species. Provides mandatory funding of \$40 million for FY2008-FY2012. [Sec. 9010]	

Topic	Current Law	House Energy Bill - H.R. 3221	Senate Energy Bill - H.R. 6 (Senate Version)	House Farm Bill - H.R. 2419	Senate Farm Bill - S. 2302	Notes
Biochar Research, Development and Demonstration	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Creates a program of competitive R&D grant program for the production and use of biochar in the agricultural sector. Authorizes \$3 million for each of FY2008-FY2012. [Sec. 9011]	“Biochar” is defined as charcoal or biomass-derived black carbon that is added to soil to improve soil fertility, nutrient retention, and carbon content.
Voluntary Renewable Biomass Certification Program	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Establishes a voluntary certification program for renewable biomass that is grown using sustainable practices. No new funding. [Sec. 9015]	
Rural Nitrogen Fertilizer Study	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Directs USDA to assess the feasibility of producing nitrogen fertilizer from renewable energy. Authorizes \$1 million for FY2008. [Sec. 9018]	

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Research and Development on Renewable Energy	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Requires USDA to research, with the Colorado Renewable Energy Collaboratory, on renewable energy including biomass crops adapted to arid regions, and storage and conversion technologies for wind and solar energy. Authorizes \$5 million for each of FY2008-FY2012. Additional authorization of \$110 million annually for FY2008-FY2012 for cellulosic biofuel research. Additional authorization of \$110 million annually for FY2008-FY2012 for small-scale biorefinery R&D. [Sec. 9021]	

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Northeast Dairy Nutrient Management and Energy Development Program	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Establishes an R&D grant program to provide for a consortium of Northeast U.S. land-grant colleges and universities for projects on dairy nutrient management and energy development. Authorizes such sums as are necessary. [Sec. 9022]	
Expansion of Special Allowance to Cellulosic Biomass Alcohol Fuel Plant Property	The Tax Relief and Health Care Act of 2006 allows 50% tax depreciation in the first year of operation for plants that produce ethanol from cellulosic biomass. [P.L. 109-432, Sec. 209]	No comparable provision.	No comparable provision.	No comparable provision.	Expands the special allowance to plants that produce all alcohols (not just ethanol) produced from cellulosic biomass. [S. 2242, Sec. 311]	

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Extension of Small Ethanol Producer Tax Credit	The Omnibus Budget Reconciliation Act of 1990 established a credit of \$0.10 per gallon for each gallon of ethanol produced by a small producer, up to 15 million gallons annually. A small producer is defined as one with less than 60 million gallons in annual production capacity. [P.L. 101-508, Sec. 11502]	No comparable provision.	No comparable provision.	No comparable provision.	Extends the credit through December 31, 2012. (The credit is currently available through December 31, 2010.) [S. 2242, Sec. 313]	
Tax Credit for Producers of Fossil-Free Alcohol	No current provision.	No comparable provision.	No comparable provision.	No comparable provision.	Establishes a credit of \$0.25 per gallon (in addition to any other credit), up to 60 million gallons, for the production of alcohol at a facility for which at least 90% of the energy used to operate the facility is biomass-derived. [S. 2242, Sec. 314]	

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Modification of Alcohol Tax Credit	The American Jobs Creation Act of 2004 established a tax credit for the use of ethanol used as motor fuel. The credit is valued at \$0.51 per gallon of ethanol blended into gasoline. [P.L. 108-357, Sec. 301]	No comparable provision.	No comparable provision.	No comparable provision.	In the first calendar year after EPA certifies that 7.5 billion gallons of renewable fuel have been blended into gasoline, the credit is reduced to \$0.46 per gallon. [S. 2242, Sec. 315]	
Calculation of Volume of Alcohol for Fuel Tax Credits	Currently, any denaturant added to alcohol is considered as part of the volume of alcohol for tax purposes. [26 U.S.C. 40(d)(4)]	No comparable provision.	No comparable provision.	No comparable provision.	The volume of any denaturant would be excluded from the applicable volume for tax purposes. [S. 2242, Sec. 316]	A denaturant is added to ethanol to make it unfit for human consumption. In most cases, gasoline is used as the denaturant for fuel ethanol.
Ethanol Tariff Extension	In general, fuel ethanol imports are subject to a \$0.54 per gallon duty and a 2.5% ad valorem tariff. The duties expire January 1, 2009. [P.L. 99-499]	No comparable provision.	No comparable provision.	No comparable provision.	Extends the duties through December 31, 2010. [S. 2242, Sec. 317]	

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Elimination and Reductions of Duty Drawback on Certain Imported Ethanol	Currently, if a manufacturer imports an intermediate product then exports the finished product or a similar product, that manufacturer may be eligible for a refund (drawback) of up to 99% of the duties paid. The duty drawback provisions include special provisions for the production of petroleum derivatives.	No comparable provision.	No comparable provision.	No comparable provision.	To qualify for the drawback, the exported product must contain ethanol for which duties have been previously paid. [S. 2242, Sec. 318]	In the case of fuel ethanol, currently in many cases the imported ethanol is used as a blending component in gasoline. Jet fuel (containing no ethanol, but considered a “like commodity” to the finished gasoline) is exported to qualify for the drawback in lieu of finished gasoline containing the originally imported ethanol.

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Treatment of Qualified Alcohol Mixtures and Qualified Biodiesel Fuel Mixtures as Taxable Fuel	Currently, qualified alcohol and qualified biodiesel fuel mixtures are not considered taxable fuel. Some fuel mixtures therefore may be eligible for tax credits even though they are not subject to fuels taxes.	No comparable provision.	No comparable provision.	No comparable provision.	Amends the tax code to define qualified alcohol and biodiesel fuel mixtures as taxable fuel. [Sec. 322]	In some cases currently, a small amount of biodiesel is added to diesel fuel, presumably to avoid the taxes on diesel fuel.