

CRS Report for Congress

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Energy Efficiency and Renewable Energy Legislation in the 109th Congress

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Summary

This report reviews the status of energy efficiency and renewable energy legislation introduced during the 109th Congress. It summarizes action on more than 50 energy efficiency and renewable energy bills. These bills cover a wide range of policy and issue areas that include appropriations, authorizations, research and development, grants, loans, financing, regulation (including a renewable portfolio standard), tax credits, goals, plans, impacts, and the environment/climate change. So far, most of these bills have focused on tax credits and incentives. The bills also cover a range of sectors that include buildings, defense, education, federal lands/energy management, farms, American Indians, and international activities. Thus far, the sector of federal lands/energy management has generated the greatest number of bills.

The bills are also categorized by type of renewable resource, type of energy efficiency measure, and technology. There is a broad range of efficiency measures and technologies, including cogeneration (combined heat and power), distributed generation, net metering, equipment and appliance standards, fuel economy standards, and transportation efficiency. The bills are fairly evenly distributed among these areas. There is also a broad range of renewable energy resources and technologies, including alcohol fuels, biofuels, biodiesel, biopower, biomass, geothermal, hydrogen, hydropower, solar, and wind. So far, the areas of fuels and wind energy have generated the greatest number of bills.

Action in the first session has focused on the discussion draft of the House omnibus energy policy bill (for which bill number H.R. 6 has been reserved). Except for tax provisions, which have yet to be addressed, the renewable energy provisions of the discussion draft of the House bill contained many, if not most, of the renewable energy recommendations in the conference report on H.R. 6 from the 108th Congress. However, the Energy and Commerce Committee's committee print issued in early April dropped many of these provisions. At the start of the committee's April markup, the committee print contained provisions that would authorize or reauthorize many programs, establish new commercial and consumer product efficiency standards, set new goals for efficiency and renewables in federal facilities and fleets, expand the Environmental Protection Agency's (EPA's) Energy Star products program, reform hydropower relicensing, expand programs for hydrogen fuel cell buses, and set a renewable fuels standard for increased use of ethanol and biodiesel.

Other action in the first session has focused on the Transportation Equity Act (H.R. 3), which has some provisions on clean (renewable) fuels, energy conservation, and advanced vehicle technologies.

For each bill listed in this report, a brief description and a summary of action are given, including references to committee hearings and reports. Also, a selected list of hearings on renewable energy is included. This report will be updated periodically.

Contents

Introduction	1
Legislation	5
House Bills (with Senate Companions)	5
Senate Bills (with House Companions)	12
Congressional Hearings, Reports, and Documents	18
CRS Reports	19

List of Tables

Table 1. Action on Energy Efficiency and Renewable Energy Legislation, 109 th Congress	2
Table 2. Energy Efficiency and Renewable Energy Bills by Topic, 109 th Congress	3

Energy Efficiency and Renewable Energy Legislation in the 109th Congress

Introduction

This report summarizes action on more than 50 energy efficiency and renewable energy bills introduced during the 109th Congress.¹ These bills cover a wide range of policy and issue areas that include appropriations, authorizations, research and development, grants, loans, financing, regulation (including a renewable portfolio standard), tax credits, funding, goals, plans, impacts, and the environment/climate change. So far, most of these bills have focused on tax credits and incentives. The bills also cover a range of sectors, including buildings, defense, education, federal lands/energy management, farms, American Indians, and international activities. Thus far, the sector of federal lands/energy management has generated the greatest number of bills. **Table 2** groups the bills by topic.

The bills are also categorized by type of renewable resource, type of energy efficiency measure, and technology. There is a broad range of efficiency measures and technologies, including cogeneration (combined heat and power), distributed generation, net metering, equipment and appliance standards, fuel economy standards, and transportation efficiency. The bills are fairly evenly distributed among these areas. There is also a broad range of renewable energy resources and technologies, including alcohol fuels, biofuels, biodiesel, biopower, biomass, geothermal, hydrogen, hydropower, solar, and wind. So far, the areas of fuels and wind energy have generated the greatest number of bills.

In the first session, initial action has focused on the discussion draft of the House omnibus energy policy bill (for which H.R. 6 has been reserved). Except for tax provisions, which have yet to be addressed, the renewable energy provisions of the discussion draft of the House bill contained many, if not most, of the renewable energy recommendations in the conference report on H.R. 6 from the 108th Congress. However, the Energy and Commerce Committee's committee print issued in early April dropped several provisions, such as photovoltaics in public buildings, geothermal leasing on federal lands, energy efficiency in federal housing for American Indians, conserve by bicycling, and neighborhood electric vehicles.

At the start of the April markup, the committee print contained provisions that would authorize or reauthorize several energy efficiency and renewable energy programs. It also would establish several new commercial and consumer product efficiency standards, set new goals for energy efficiency and renewable energy in

¹ This report is intended to complement and support CRS Issue Brief IB10020, *Energy Efficiency: Budget, Oil Conservation, and Electricity Conservation Issues*; and CRS Issue Brief IB10041, *Renewable Energy: Tax Credit, Budget, and Electricity Production Issues*.

federal facilities and fleets, expand the Energy Star products program, reform hydropower relicensing, expand programs for hydrogen fuel cell buses, and set a renewable fuels standard for increased use of ethanol and biodiesel.

Other action in the first session has focused on the Transportation Equity Act (H.R. 3), which has some provisions on clean (renewable) fuels, energy conservation, and advanced vehicle technologies. Action on these bills is summarized in **Table 1**.

For each bill listed in this report, a brief description and a summary of action are given, including references to committee hearings and reports. Also, a selected list of hearings on energy efficiency and renewable energy is included.

Table 1. Action on Energy Efficiency and Renewable Energy Legislation, 109th Congress

Bill	Category	Action	Date
H.R. 6	Omnibus energy bill	Markup	4/6/2005
H.R. 1158	Steel and aluminum energy conservation reauthorization bill	Reported	3/17/2005
H.R. 3	Transportation equity bill	Passed House Reported	3/10/2005 3/8/2005
H.R. 610	Energy R&D authorization bill	Reported	2/10/2005
S. 131	Clear Skies (clean air act) bill	Failed to pass committee	3/9/2005
S. 606	Renewable fuel standard	Ordered to be Reported	3/16/2005

**Table 2. Energy Efficiency and Renewable Energy Bills
by Topic, 109th Congress**

<i>I. Policy and Issue Areas</i>	
Appropriations	[no bills yet]
Authorizations/ Omnibus Energy Policy	<i>H.R. 6 [reserved]</i> , H.R. 610, H.R. 612, H.R. 1158, S. 665, S. 726
Research and Development	H.R. 610, H.R. 612, S. 387
Grants	H.R. 3, H.R. 168, H.R. 610, H.R. 722, H.R. 1215
Loans/Financing	H.R. 388, S. 269, S. 426
Renewable Portfolio Standard	H.R. 983, S. 427
Tax Credit for Investment	H.R. 17, H.R. 424, H.R. 626, H.R. 1212, H.R. 1397/S. 671, S. 387
Tax Credit for Energy Production	H.R. 36/S. 610, H.R. 141, H.R. 381, S. 35, S. 387, S. 542
Tax Credit for Fuel Use	H.R. 113, H.R. 1255
Goals/Plans/Impact Information	H.R. 3, H.R. 373, H.R. 610, H.R. 722, H.R. 1158, S. 606
Environment/Climate Change	H.R. 759, S. 386, S. 387, S. 388

<i>II. Sectors</i>	
Buildings	H.R. 610, H.R. 612, H.R. 722, H.R. 737, H.R. 1212
Defense	H.R. 174
Education	H.R. 737, S. 726
Federal Lands/ Energy Management	H.R. 174, H.R. 705, H.R. 722, H.R. 779, H.R. 983, S. 650, S. 665
Farms/American Indians	H.R. 622/S. 326, S. 269, S. 373, S. 502, S. 542
International/Trade	H.R. 1212, S. 388, S. 680

<i>III. Energy Efficiency Measures and Technologies</i>	
Cogeneration/Combined Heat and Power (CHP)	S. 386, S. 388, S. 726
Distributed Generation/Net Metering/Electric Power	S. 150, S. 426, S. 726
Equipment/Lighting/Appliances	H.R. 737, H.R. 1421, S. 426, S. 726
Fuel Economy	H.R. 705, H.R. 722
Transportation	H.R. 423, H.R. 444, H.R. 626, H.R. 722, S. 373

<i>IV. Renewable Energy Resources and Technologies</i>	
Alcohol Fuels/Biofuels/Biodiesel	H.R. 3, H.R. 36/S. 610, H.R. 113, H.R. 140, H.R. 325, H.R. 381, H.R. 388, H.R. 1255, H.R. 1398, S. 129, S. 373, S. 502, S. 587, S. 610, S. 650
Biopower/Biomass	H.R. 610, H.R. 612, H.R. 622, H.R. 737, H.R. 983, H.R. 1127, S. 150, S. 326, S. 427, S. 502, S. 542
Geothermal	H.R. 174, H.R. 622/S. 326, H.R. 1127, S. 269
Hydrogen	H.R. 3, H.R. 325, H.R. 610, H.R. 612, H.R. 626, H.R. 722, H.R. 737, S. 129, S. 373, S. 427, S. 436, S. 665, S. 726
Hydropower	H.R. 722, H.R. 737, H.R. 779, S. 427
Solar	H.R. 17, H.R. 381, H.R. 610, H.R. 612, H.R. 622/S. 326, H.R. 722, H.R. 737, H.R. 1127, S. 150, S. 269, S. 326, S. 426, S. 427, S. 726
Wind	H.R. 141, H.R. 381, H.R. 610, H.R. 612, H.R. 622/S. 326, H.R. 737, H.R. 759, H.R. 983, H.R. 1127, S. 35, S. 150, S. 269, S. 326, S. 342, S. 426, S. 427, S. 502, S. 542

Legislation

House Bills (with Senate Companions)

H.R. 3 (Young)

Transportation Equity Act. Section 1208 on High-Occupancy Vehicle (HOV) Lanes includes provisions for alternative-fueled vehicles and energy-efficient vehicles. Section 3009 on Clean Fuels Formula Grant Program includes provisions for biodiesel, alcohol fuels, and fuel cells. Section 5213 on Metropolitan Planning directs that goals include energy conservation. Other provisions in the bill address traffic congestion, intelligent transportation systems, bicycling and pedestrian issues, and advanced vehicle technologies. Introduced February 9, 2005; referred to Committee on Transportation and Infrastructure. Reported (H.Rept. 109-12, Parts I and II) March 8. Passed House, amended, March 10.

H.R. 6 (Hastert)

Reserved for the House version of an omnibus energy policy bill.

H.R. 17 (Hayworth)

Residential Solar Energy Tax Credit Act. Creates a 15% investment tax credit for photovoltaic (electric) equipment, with a maximum of \$2,000. Also, it establishes a 15% credit for solar water heating equipment, with a maximum of \$2,000. Introduced January 4, 2005; referred to Committee on Ways and Means.

H.R. 36 (S. King)/S. 610 (Talent)

Amends the Internal Revenue Code to revise the tax credit for biodiesel used as fuel to include a credit for the production of agri-biodiesel fuel equal to 10 cents for each gallon produced. Limits: (1) the amount of qualified agri-biodiesel production of a producer to 15 million gallons for any taxable year; and (2) eligible producers to those with an annual productive capacity not exceeding 60 million gallons. Revises the small ethanol producer tax credit to: (1) expand the eligibility of small ethanol producers for the credit; (2) exclude the credit from the definition of passive activity credit; and (3) exclude credit amounts from inclusion in gross income. House bill introduced January 4, 2005; referred to Committee on Ways and Means. Senate bill introduced March 11, 2005; referred to Committee on Finance.

H.R. 113 (M. Kennedy)

Requires the Secretary of Transportation to determine apportionments to states of federal-aid highway funds for FY2006 or any subsequent fiscal year in a particular manner if FY2005 or any preceding fiscal year is taken into account in the computation. Directs the Secretary, in such an instance, to base his calculations on the amount of estimated tax receipts that would have resulted if certain alcohol fuel mixture and biodiesel mixture excise tax credits under the American Jobs Creation Act of 2004 had taken effect at the beginning of the fiscal year. Introduced January 5, 2005; referred to Committee on Transportation and Infrastructure.

H.R. 140 (McHugh)

Promotes the use of anaerobic (methane) digesters by agricultural producers and rural small businesses to produce renewable energy and improve environmental quality. Introduced January 4, 2005; referred to Committee on Agriculture.

H.R. 141 (McHugh)

Makes permanent the renewable energy production tax credit for producing electricity from wind. Introduced January 4, 2005; referred to Committee on Ways and Means.

H.R. 168 (Millender-McDonald)

Goods Movement Act of 2005. Directs the Secretary of Transportation to consider congestion relief, energy consumption, and intelligent transportation systems in selecting projects for grants to state and local government. Introduced January 4, 2005; referred to Committee on Transportation and Infrastructure.

H.R. 174 (Millender-McDonald)

Geothermal Energy Initiative Act of 2005. Calls for a new resource assessment, more access to federal land, improved leasing and permitting, and reimbursement for required environmental analyses. Introduced January 4, 2005; referred to Committee on Resources and the Committee on Agriculture.

H.R. 325 (Graves)/S. 129 (Talent)

Hybrid HOV Access Act. Allows energy-efficient and low-emission vehicles to use HOV facilities. House bill introduced January 25, 2005; referred to Committee on Transportation and Infrastructure. Senate bill introduced January 24, 2005; referred to Committee on Environment and Public Works.

H.R. 381 (Gillmor)

Permits a state to provide tax incentives for production of electricity from: (1) coal mined in the state and used in a facility, if such production meets Federal and State laws and if the facility uses clean coal technology, including scrubbers; (2) a renewable source such as wind, solar, or biomass; or (3) ethanol. Declares that any such State tax incentive shall: (1) be considered to be a reasonable regulation of commerce, and (2) not be considered to impose an undue burden on interstate commerce or to otherwise impair, restrain, or discriminate, against interstate commerce. Introduced January 26, 2005; referred to Committee on Energy and Commerce and Committee on Judiciary.

H.R. 388 (Kaptur)

Biofuels Energy Independence Act of 2005. Authorizes the Secretary of Agriculture to make and guarantee loans for biofuel production, distribution, development, and storage. Sets forth loan eligibility provisions. Directs the Secretary to establish a related revolving fund. Authorizes the Secretary to administer a Biofuels Feedstocks Energy Reserve to: (1) provide feedstocks in furtherance of biofuel-based energy production; and (2) support the biofuels energy industry when production is at risk due to feedstock reductions or commodity price increases. Sets forth related provisions respecting commercial commodity purchases, release of commodity stocks, and storage payments. Introduced January 26, 2005; referred to

Committee on Agriculture. Senate bill introduced March 15; referred to Committee on Energy and Natural Resources.

H.R. 423 (Terry)

Homeland Infrastructure Power Security and Assurance Incentives Act of 2005. Authorizes the Secretary of Energy to establish an Advanced Power System Technology Incentive Program of incentive payments to eligible owners or operators to: (1) support deployment of new advanced power system technologies such as fuel cells, turbines, hybrid, and storage system power technologies; and (2) improve and protect certain critical governmental, industrial, and commercial processes. Requires such funding to be used to increase power generation through enhanced operational, economic, and environmental performance. Introduced January 26, 2005; referred to Committee on Energy and Commerce.

H.R. 424 (Terry)

Energy Efficiency Investment Act of 2005. Amends the Internal Revenue Code to allow a tax credit for up to 25% of the cost of certain energy efficient property installed in business and residential properties. Introduced January 26, 2005; referred to Committee on Ways and Means.

H.R. 444 (Issa)

Hybrid Vehicle HOV Access Act. Amends Federal highway law to authorize a State to permit a hybrid vehicle with fewer than two occupants to operate in high occupancy vehicle (HOV) lanes. Defines "hybrid vehicle" as a motor vehicle: (1) that draws propulsion energy from onboard sources of stored energy which are both an internal combustion or heat engine using combustible fuel and a rechargeable energy storage system; and (2) which (in the case of a passenger automobile or light truck) for 2002 and later models meets certain clean air requirements. Introduced February 1, 2005; referred to Committee on Transportation and Infrastructure.

H.R. 610 (Biggert)

Energy Research, Development, Demonstration, and Commercial Application Act of 2005. Directs the Secretary of Energy to establish R&D programs in: (1) vehicles, buildings, and industrial processes; (2) renewable energy research; (3) civilian nuclear energy research; (4) fuel recycling technology; (5) fossil energy production, upgrading, conversion and consumption; (6) oil and gas research; (7) fuel cells; and (8) ultra-deepwater and unconventional natural gas. Instructs the Secretary to: (1) plan programs directly related to fuel cells or hydrogen; and (2) conduct programs to address hydrogen production from diverse energy sources. Directs the President to establish an interagency task force to work toward fuel infrastructure for hydrogen and hydrogen-carrier fuels, including buses and other fleet transportation. Establishes the Hydrogen Technical and Fuel Cell Advisory Committee. Directs the Secretary to establish a competitive grant pilot program for acquisition of: (1) alternative fueled vehicles or fuel cell vehicles; (2) hybrid vehicles; and (3) ultra-low sulfur diesel vehicles. Directs the Administrator of the Environmental Protection Agency to establish a grant program for: (1) the replacement of certain school buses with alternative fuel school buses and ultra-low sulfur diesel fuel school buses; and (2) installation of retrofit technologies for diesel school buses. Instructs the Secretary to enter into cooperative agreements: (1) with private sector fuel cell bus developers for the development of fuel cell-powered school buses; and (2) government entities

using natural gas-powered school buses and private sector fuel cell bus developers to demonstrate the use of fuel cell-powered school buses. Directs the Secretary to: (1) establish a fuel cell transit bus demonstration program; and (2) award grants to universities for the establishment of Centers of Excellence for Energy Systems of the Future to advance new clean coal technologies. Introduced February 8, 2005; referred to House Committees on Science, Resources, and Energy and Commerce. Science Committee ordered to be reported February 10, 2005.

H.R. 612 (Biggert)

Energy Basic and Applied Sciences Act of 2005. Requires the Secretary of Energy to establish advisory committees to advise the Department's applied programs in energy efficiency, renewable energy, and other areas. Directs the Secretary to establish a R&D program in: vehicles, buildings, and industrial processes; renewable energy research; fuel cells; and other areas. Introduced February 8, 2005; referred to Committees on Science, Resources, and Energy and Commerce.

H.R. 622 (Bono)/ S. 326 (Smith)

Renewable Energy Production Incentive (REPI) Reform Act. Amends the Energy Policy Act of 1992 to modify renewable energy production incentive payment guidelines to provide that if there are insufficient appropriations to make full payments for electric production from all qualified renewable energy facilities in any given year, the Secretary of Energy shall assign 60% of appropriated funds for that year to facilities that use solar, wind, geothermal, or closed-loop (dedicated energy crops) biomass technologies to generate electricity, and assign the remaining 40% to other projects. Redefines a qualified renewable energy facility as one: (1) owned by certain tax-exempt electricity-generating cooperatives, certain public utilities, a state, territorial, or local governments or an Indian tribal government; and (2) which may involve electricity generation by landfill gas. Extends through FY2015 the deadline for first use of a facility eligible for incentive payments. House bill introduced February 8, 2005; referred to Committee on Energy and Commerce. Senate bill introduced February 9, 2005; referred to Committee on Energy and Natural Resources.

H.R. 626 (Camp)

VEHICLE Technology Act of 2005. Amends the Internal Revenue Code to repeal the phaseouts of the tax credit for qualified electric vehicles and of the tax deduction for clean-fuel vehicles. Allows a tax credit for investment in certain alternative motor vehicles, including fuel cell vehicles, advanced lean burn technology motor vehicles, hybrid motor vehicles, alternative fuel motor vehicles, and mixed-fuel vehicles. Sets forth formulas for determining the amount of the credit based on various factors, including vehicle weight and fuel efficiency ratings. Modifies the tax deduction for clean-fuel vehicles and certain refueling property to: (1) extend the terminating date for such deduction through 2009, and through 2012 for hydrogen-related property; (2) increase to \$150,000 the cost limitation for the deduction; and (3) extend the deduction to nonbusiness property. Introduced February 8, 2005; referred to Committee on Ways and Means.

H.R. 705 (Gilchrest)

Automobile Fuel Economy Act of 2005. Sets forth certain increased average fuel economy standards for certain light trucks, automobiles (up to 10,000 pounds gross vehicle weight), and certain classes of vehicles in the federal fleet that are manufactured or purchased after specified dates. Introduced February 9, 2005; referred to Committee on Energy and Commerce and Committee on Government Reform.

H.R. 722 (Oberstar)

Securing Transportation Energy Efficiency for Tomorrow Act of 2005. Amends the Federal Property and Administrative Services Act of 1949 to authorize the Administrator of General Services to establish a program for the procurement and installation of photovoltaic solar electric systems for electric production in public buildings. Directs the Architect of the Capitol to evaluate the energy infrastructure of the Capitol Complex to determine how it could be augmented to become more energy efficient, using photovoltaic solar energy systems, district-heating, and other unconventional and renewable energy resources. Amends federal transportation law to: (1) direct the Secretary of Transportation (Secretary) to establish a program of grants to state and local governments for fuel conservation projects; (2) authorize the Secretary to make grants for fuel cell bus technology projects; and (3) require environmental impact statements for federal-aid highway and transit projects to consider energy impacts as an environmental project consequence. Directs the Secretary to establish: (1) a Conserve By Bicycling pilot program for projects to encourage the use of bicycles in place of motor vehicles; and (2) a specified public-private research partnership dedicated to advancement of railroad technology, efficiency, and safety owned by the Federal Railroad Administration and operated in the private sector. Directs: (1) the Secretary to establish a pilot clean airport bus replacement and fleet expansion grant program; and (2) the Administrator of the Federal Aviation Administration to establish a public-private research partnership to develop a clean ground demonstrator engine utilizing specified National Aeronautics and Space Administration-developed technologies. Directs the Secretary to establish a public-private research partnership to develop and demonstrate technologies that increase fuel economy, reduce emissions, and lower costs of marine transportation, as well as the efficiency of intermodal transfers. Directs the Secretary of the Army to study and report to Congress on the potential for reduced fossil fuel consumption through an increase in U.S. hydropower capabilities. Amends the Internal Revenue Code to exclude from gross income as a qualifying transportation fringe benefit a commuting allowance of \$75 per month for individuals who bicycle, carpool, or car-share to work. Introduced February 9, 2005; referred to Committee on Energy and Commerce and Committee on Government Reform.

H.R. 737 (Woolsey)

Renewable Energy and Energy Efficiency Act of 2005. Declares it shall be policy of the United States that its research, development, demonstration, and commercial applications programs be designed to enable 20% of domestic energy generated from stationary sources to be generated from nonhydropower renewable energy sources by the year 2020. Prescribes research and development program goals to implement such policy in connection with enhanced: (1) renewable energy; (2) energy efficiency; and (3) aeronautical system energy. Directs the Secretary of Energy to: (1) submit to Congress an assessment of renewable energy resources

available for commercial application; and (2) implement a Next Generation Lighting Initiative for advanced solid-state lighting technologies based on white light-emitting diodes. Requires the Director of the Office of Science and Technology Policy to establish: (1) an interagency group to develop a National Building Performance Initiative; and (2) an advisory committee to analyze and provide recommendations on potential private sector roles and participation in the Initiative. Directs the Secretary of Energy to: (1) commission an independent assessment of innovative financing techniques to facilitate construction of new renewable energy and energy efficiency facilities; (2) establish a demonstration program for innovative technologies for renewable energy sources in buildings owned or operated by a state or local government; (3) provide assistance to small businesses and startup companies for the commercial application of renewable energy and energy efficiency technologies developed by or with support from the Department of Energy; (4) establish an education and outreach program on renewable energy and energy efficiency technologies; and (5) establish a competitive matching grant pilot program for voluntary local government programs that seek to promote innovative energy efficiency technologies and processes to reduce the industrial use of water and the discharge of wastewater from commercial and industrial entities. Introduced February 9, 2005; referred to Committee on Energy and Commerce.

H.R. 759 (Gilchrest)

Climate Stewardship Act of 2005. Establishes various policies for curbing greenhouse gas emissions that include several energy-efficiency and renewable energy measures. Introduced February 10, 2005; referred to Committee on Science and to Committee on Energy and Commerce.

H.R. 779 (Radanovich)

Federal Hydropower Enhancement Act of 2005. Directs the Secretary of the Interior, the Secretary of Energy, and the Secretary of the Army to study and report to Congress on the potential for increasing electric power production capability at federally owned or operated facilities for water regulation, storage, and conveyance. Introduced February 10, 2005; referred to Committee on Resources and to Committee on Transportation and Infrastructure.

H.R. 983 (T. Udall)

Amends the Public Utility Regulatory Policies Act of 1978 to prescribe guidelines for a Federal Renewable Portfolio Standard (RPS) for calendar years 2008 through 2037. Specifies a schedule of graduated annual percentages of a supplier's base amount, from 1% in 2008 up to 20% in 2027 and thereafter, that shall be generated from renewable energy resources. Authorizes a supplier to satisfy such requirements through the submission of renewable energy credits to the Secretary of Energy. Provides for energy credit trading or borrowing among suppliers. Directs the Secretary to: (1) encourage federally owned utilities, municipally owned utilities, and rural electric cooperatives that sell electric energy to electric consumers for purposes other than resale to participate in the renewable portfolio standard program; and (2) establish by December 31, 2007, a state renewable energy account program. Introduced February 17, 2005; referred to Committee on Energy and Commerce.

H.R. 1127 (T. Lee)

Renewable Energy Production Incentive (REPI) Reform and Reauthorization Act. Makes equal incentives available from the Department of Energy (solar, wind, geothermal), Department of Agriculture (biomass), and Environmental Protection Agency (landfill gas). Introduced March 3, 2005; referred to Committee on Energy and Commerce.

H.R. 1158 (Hart)

Reauthorizes the Steel and Aluminum Energy Conservation and Technology Competitiveness Act of 1988. Modifies the list of priorities that the Secretary of Energy must consider in reviewing research and development activities for possible inclusion in the Steel Initiative Research Plan to include the development of: (1) advanced sheet and bar steel; and (2) technologies that reduce greenhouse gas emissions. Introduced March 8, 2005; referred to Committee on Science.

H.R. 1212 (Weller)

Save America's Valuable Energy Resources Act of 2005. Amends the Internal Revenue Code to establish tax credits for: (1) qualified energy efficient improvements to existing homes; and (2) the construction of qualified new energy efficient homes. Allows a tax deduction for energy efficient commercial building property expenditures. Introduced March 10; referred to Committees on Energy and Commerce, Ways and Means, and Science.

H.R. 1215 (Gingrey)

Green Chemistry Research and Development Act of 2005. Provision for grants to manufacturers includes measures that would increase energy efficiency. Introduced March 10, 2005; referred to Committee on Science.

H.R. 1255 (C. Peterson)

Clean Power Plant Act of 2005. Amends the Internal Revenue Code to extend until December 31, 2010, the tax credit for biodiesel used as fuel. Introduced March 10, 2005; referred to Committee on Ways and Means.

H.R. 1397 (N. Johnson)/S. 671 (Lieberman)

Establishes an investment tax credit for fuel cell equipment purchased for business and residential uses. The fuel cell must have a minimum capacity of 0.5 kilowatt (kw). The upper limit of the credit is \$500 for each 0.5 kw, with a maximum of 30% of the total fuel cell cost. House bill introduced March 17, 2005; referred to Committee on Ways and Means. Senate bill introduced March 17, 2005; referred to Committee on Finance.

H.R. 1398 (Kaptur)

Amends the Clean Air Act to require that, after the year 2010, all gasoline sold in the United States for motor vehicles contain at least 10% ethanol and that all diesel fuel sold in the United States for motor vehicles contain at least 5% Biodiesel. Introduced March 17, 2005; referred to Committee on Energy and Commerce.

H.R. 1421 (Nussle)

Resource Efficient Appliance Incentives Act of 2005. Creates an equipment production credit for 2005 through 2010 that ranges from \$50 to \$150 per unit for

clothes washers and refrigerators that meet certain energy-efficiency criteria. The total value of credits is limited by a dollar amount and by a percent of gross revenue. Introduced March 17, 2005; referred to Committee on Ways and Means.

H.R. 1482 (Wynn)

Hydrogen Liberty Act. Authorizes \$3.9 billion over 10 years for research and development of advanced nuclear reactor (\$1.3 billion), solar energy (\$1.3 billion), and wind energy (\$1.3 billion) technologies for the production of hydrogen. The bill would create 15 demonstration projects, five for each of the three technologies. Introduced April 5, 2005; referred to Committee on Science and Committee on Energy and Commerce.

H.R. 1511 (Foley)

Extends the renewable energy electricity production tax credit (PTC) for five years. Introduced April 6, 2005; referred to Committee on Ways and Means.

Senate Bills (with House Companions)

S. 35 (Conrad)

Extends the renewable energy production tax credit (PTC) for facilities until January 1, 2011. Introduced January 24, 2005; referred to Committee on Finance.

S. 129 (Talent)/H.R. 325 (Graves)

Hybrid HOV Access Act. Allows energy-efficient and low-emission vehicles to use HOV facilities. Senate bill introduced January 24, 2005; referred to Committee on Environment and Public Works. House bill introduced January 25, 2005; referred to Committee on Transportation and Infrastructure.

S. 131 (Inhofe)

Clear Skies Act of 2005. Amends the Clean Air Act to reduce air pollution through expansion of cap and trade programs. Section 413 preserves an energy conservation and renewable energy reserve of 300,000 sulfur dioxide emission reduction allowances, which could be used to help meet air pollution reduction requirements. Introduced January 24, 2005; referred to Committee on Environment and Public Works. Committee held markup March 9, 2005, but the bill failed to pass Committee on a tie (9-9) vote.

S. 150 (Jeffords)

Clean Power Act of 2005. Requires the Environmental Protection Agency (EPA) to: (1) set regulations to reduce emissions of sulfur dioxide, nitrogen oxides, carbon dioxide, and mercury from certain electric generation facilities by January 1, 2010; and (2) establish an emission allowance tracking and transfer system for these emissions. Section 707 directs that up to 20% of allowances for reductions of sulfur dioxide, nitrogen oxides, and carbon dioxide can be obtained from energy efficiency and renewable energy sources. Introduced January 25, 2005; referred to Committee on Environment and Public Works.

S. 269 (Kerry)

Small Business and Farm Energy Emergency Relief Act of 2005. Section 3 makes loans available to small business to convert from heating fuel to alternative

energy sources that may include biowaste, geothermal energy, solar energy, wind energy, and fuel cells. Introduced February 2, 2005; referred to Committee on Small Business and Entrepreneurship.

S. 326 (Smith)/H.R. 622 (Bono)

Renewable Energy Production Incentive (REPI) Reform Act. Amends the Energy Policy Act of 1992 to modify renewable energy production incentive payment guidelines to provide that if there are insufficient appropriations to make full payments for electric production from all qualified renewable energy facilities in any given year, the Secretary of Energy shall assign 60% of appropriated funds for that year to facilities that use solar, wind, geothermal, or closed-loop (dedicated energy crops) biomass technologies to generate electricity, and assign the remaining 40% to other projects. Redefines a qualified renewable energy facility as one: (1) owned by certain tax-exempt electricity-generating cooperatives, certain public utilities, a State, territorial, or local governments or an Indian tribal government; and (2) which may involve electricity generation by landfill gas. Extends through FY2015 the deadline for first use of a facility eligible for incentive payments. Senate bill introduced February 9, 2005; referred to Committee on Energy and Natural Resources. House bill introduced February 8, 2005; referred to Committee on Energy and Commerce.

S. 373 (Harkin)

Renewable Hydrogen Passenger Vehicle Act of 2005. Amends the Farm Security and Rural Investment Act of 2002 to direct the Secretary of Energy, in coordination with the Secretary of Agriculture, to conduct a three-year program to develop and demonstrate the cost-effective operation of a fleet of at least 10 direct hydrogen passenger vehicles based on existing commercial technology under which the hydrogen is derived from ethanol or other domestic low-cost transportable renewable feedstocks. Introduced February 14, 2005; referred to Committee on Energy and Natural Resources.

S. 386 (Hagel)

Climate Change Technology Deployment in Developing Countries Act of 2005. Section 2 includes cogeneration and renewable energy as eligible technologies for demonstration projects that could help developing countries reduce greenhouse gas emissions. Introduced February 15, 2005; referred to Committee on Foreign Relations.

S. 387 (Hagel)

Climate Change Technology Tax Incentives Act of 2005. Section 201 expresses the sense of the Senate that (1) the renewable energy production tax credit (PTC) should be extended through 2010; and (2) the research investment tax credit should be increased and made permanent. Senate bill introduced February 15, 2005; referred to Committee on Finance.

S. 388 (Hagel)

Climate Change Technology Deployment and Infrastructure Credit Act of 2005. Credit-based financial incentives would be available to support demonstration projects for cogeneration, renewable energy, and other "climate technologies." Introduced March 15, 2005; referred to Committee on Energy and Natural Resources.

S. 426 (Jeffords)

Electric Reliability Security Act of 2005. Contains several provisions to support energy efficiency and renewable energy, including a system benefit fund (Section 201) to fund state energy efficiency and renewable energy programs, an energy efficiency performance standard (Section 202) to reduce electricity demand by 10% over 10 years, appliance efficiency standards (Section 203) for central air conditioners and heat pumps, and loan guarantees (Section 204) for fuel cells, combined heat and power (CHP), energy efficiency, and several types of renewables. Also, Title III has a provision for net metering. Introduced February 17, 2005; referred to Committee on Energy and Natural Resources.

S. 427 (Jeffords)

Renewable Energy Investment Act of 2005. Creates a federal renewable portfolio standard by amending the Public Utility Regulatory Policies Act of 1978 to require retail electric suppliers to submit to the Secretary of Energy renewable energy credits in an amount equal to the required annual percentage of the retail electric supplier's total amount of kilowatt-hours of non-hydropower electricity sold to retail consumers during the previous calendar year (excluding incremental hydropower). States that a renewable energy credit that is not used to satisfy the minimum requirement for that year may be carried over for use within the next two years. Specifies a schedule of the minimum percentage of renewable energy sources that must be used to generate the total amount of non-hydropower electricity sold by each retail electric supplier during a calendar year (excluding incremental hydropower). Directs the Secretary to: (1) establish a program to issue, monitor the sale or exchange of, and track renewable energy credits; and (2) make funds available under this Act to State energy agencies for grant programs for renewable energy research and development, and for loan guarantees to encourage construction of renewable energy facilities. Introduced February 17, 2005; referred to Committee on Energy and Natural Resources.

S. 436 (Akaka)

Directs the Secretary of Energy to assess the economic implications of the dependence of the State of Hawaii on oil as its principal source of energy, including the technical and economic feasibility of increasing the contribution of renewable energy resources for generation of electricity, on an island-by-island basis; and the technical and economic feasibility of using renewable energy sources (including hydrogen) for ground, marine, and air transportation energy applications to displace the use of refined petroleum products. Introduced February 17, 2005; referred to Committee on Energy and Natural Resources.

S. 502 (Coleman)

Rural Renaissance Act. Allows funds developed for a "Rural Renaissance Trust Account" to be used for renewable energy projects on farms. Introduced March 3, 2005; referred to Committee on Finance.

S. 542 (Dorgan)

Amends the Internal Revenue Code to: (1) extend through 2010 the renewable energy electricity production tax credit (PTC) for certain renewable resources (e.g., wind, biomass, poultry waste); (2) allow certain organizations, including tax-exempt organizations, state and local governments, and Indian tribal governments, to sell

unused amounts of such tax credit. Introduced March 7, 2005; referred to Committee on Finance.

S. 587 (Dayton)

Requires that automobiles and light trucks manufactured after model year 2006 be able to operate on a fuel mixture that is at least 85% ethanol. Introduced March 10; referred to Committee on Commerce, Science, and Transportation.

S. 606 (Thune)

Reliable Fuels Act. Sets a goal to increase ethanol (including ethanol derived from cellulosic biomass) use from 3.8 billion gallons in 2006 to 6.0 billion gallons in 2012. Introduced March 11, 2005; referred to Committee on Environment and Public Works. Ordered to be reported, March 16, 2005.

S. 610 (Talent)/H.R. 36 (S. King)

Amends the Internal Revenue Code to revise the tax credit for biodiesel used as fuel to include a credit for the production of agri-biodiesel fuel equal to 10 cents for each gallon produced. Limits: (1) the amount of qualified agri-biodiesel production of a producer to 15 million gallons for any taxable year; and (2) eligible producers to those with an annual productive capacity not exceeding 60 million gallons. Revises the small ethanol producer tax credit to: (1) expand the eligibility of small ethanol producers for the credit; (2) exclude the credit from the definition of passive activity credit; and (3) exclude credit amounts from inclusion in gross income. Senate bill introduced March 11, 2005; referred to Committee on Finance. House bill introduced January 4, 2005; referred to Committee on Ways and Means.

S. 650 (Lugar)

Fuels Security Act of 2005. Section 101 increases the renewable fuel standard (RFS) to 8 billion gallons by 2012. Section 102 directs federal agencies purchases of gasoline to include 10% ethanol-blended gasoline within five years. It also directs agencies' purchases of diesel fuel to include 2% biodiesel in five years and 20% biodiesel in 10 years. Introduced March 17, 2005; referred to the Committee on Environment and Public Works.

S. 665 (Dorgan)

Hydrogen and Fuel Cell Technology Act of 2005. Authorizes \$2.3 billion over 10 years for hydrogen supply R&D programs and \$1.7 billion over 10 years for fuel cell technology R&D programs. Further, over 10 years, it also authorizes \$2.7 billion for vehicle demonstration programs, \$900 million for market transition programs, \$225 million for federal procurement programs, and \$55 million for regulatory programs. Introduced March 17, 2005; referred to Committee on Energy and Natural Resources.

S. 680 (Snowe)

Efficient Energy Through Certified Technologies and Electricity Reliability (EFFECTER) Act of 2005. Section 101 creates an income tax deduction (\$2.25 per square foot maximum) for energy efficiency measures that reduce commercial building energy use by 50% below the American Society of Heating, Refrigeration, and Air Conditioning Equipment Association's (ASHRAE's) 90.1 industry energy efficiency standard. Section 102 establishes an investment tax credit for energy

efficiency measures in new home construction that reduce energy use by 30% (\$1,000 maximum) or by 50% (\$2,000 maximum). Section 103 sets a tax deduction for business use of solar hot water, photovoltaics, heat pumps (gas, electric, ground source), furnaces, and boilers. It also creates a tax deduction (\$6,000 maximum) for such equipment used in residential rental properties that reduces energy use by 50% (pro-rated for smaller energy reductions). Section 104 creates a nonbusiness tax credit (\$2,000 maximum) for equipment that reduces energy use by 50%. Section 105 establishes an investment tax credit available over four years to combined heat and power (CHP or cogeneration) systems smaller than 15 megawatts (MW) that satisfy certain efficiency standards. Section 201 sets energy efficiency test procedures and standards for a variety of equipment and products. For battery chargers and external power supplies, the Secretary of Energy has three years to determine whether standards are needed. Further, standards (or requirements) are set for vending machines, commercial refrigerators and freezers, illuminated exit signs, torchieres, distribution transformers, traffic signal modules, unit heaters, compact fluorescent light bulbs, ceiling fans, dehumidifiers, spray valves, and furnace fans. Section 202 directs the Secretary of Energy to issue a rulemaking that assesses effectiveness of labeling requirements and a rulemaking to set labeling requirements for additional consumer products (including distribution transformers). Section 203 sets test procedures and standards for commercial package air conditioners and heating equipment. Section 204 creates standards for commercial refrigerators and freezers. Section 301 directs federal agencies to procure, where it is cost-effective, energy equipment designated by EPA Energy Star and the DOE Federal Energy Management Program (FEMP). Section 302 permanently extends the authority for federal agencies to enter energy saving performance contracts (ESPCs). Section 303 sets federal building energy performance standards by updating the baseline from the 1992 Council of American Building Officials (CABO) to the 2003 International Energy Conservation Code (IECC). Further, it directs the Secretary of Energy to require new federal buildings to achieve a 30% energy reduction, provided it is cost-effective on a life-cycle basis. Section 401 modifies the Public Housing Capital Fund to include certain energy and water use efficiency improvements. Section 402 directs the Secretary of Housing and Urban Development (HUD) to provide grants for certain energy and water efficiency improvements to multifamily housing projects. Section 403 directs public housing agencies to purchase cost-effective Energy Star or FEMP-designated appliances and products. Section 404 changes the energy efficiency standards and codes for public housing from CABO to the 2003 International Energy Conservation Code, where HUD finds it cost-effective. Introduced March 17, 2005; referred to Committee on Finance.

S. 726 (Alexander)

Natural Gas Price Reduction Act of 2005. Section 101 authorizes funding for an energy conservation public education initiative. Section 102 sets efficiency standards, test procedures, and labeling requirements for several types of residential and commercial equipment. Section 103 authorizes funding for distributed generation, solar energy, and biomass technologies. Section 104 authorizes funding to accelerate hydrogen and fuel cell development. Section 105 would, under certain conditions, repeal PURPA Section 210 requirements for cogeneration and small power facilities. Section 106 calls for a study of cogeneration and small power. Section 108 directs states to consider requiring net metering services for electric utility customers. Section 109 directs states to consider providing time-based

schedules and meters for customers. Section 113 provides financial incentives to industry to encourage use of gasification equipment that uses biomass and other fuels. Introduced April 6, 2005; referred to Committee on Energy and Natural Resources.

S. 727 (Alexander)

Tax Incentives for the Natural Gas Price Reduction Act of 2005. Section 2 makes a 10% investment tax credit available over four years to combined heat and power (CHP or cogeneration) systems smaller than 50 megawatts (MW) that satisfy certain efficiency standards. Section 3 increases the investment tax credit for solar energy equipment from 10% to 30% for five years. Also, it extends the renewable energy production tax credit (PTC) for solar and geothermal energy for five years, and establishes a 30% tax credit (\$7,500 maximum) for residential solar heating equipment. Section 4 has investment tax credits for residential solar (electric and water heating, 15%), wind (15%), and fuel cell (20%) equipment. It also creates a 20% investment tax credit (\$2,000 maximum) to homeowners for retrofits to existing residential housing with energy efficient envelope components (insulation, windows, roofs, heating equipment); and an equipment tax credit (maximum \$2,000) to home builders for envelope components that reduce home energy use by 30%. Section 4 also provides a tax credit to manufacturers (\$60 million maximum) for energy-efficient clothes washers (\$100 each) and refrigerators (\$150 each). Further, Section 4 creates a tax deduction (\$1.50 per square foot maximum) for energy efficient equipment in commercial buildings that reduces energy use by 50%. Introduced April 6, 2005; referred to Committee on Finance.

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U.S. Congress. House. Committee on Appropriations. Subcommittee on Energy and Water Development, and Related Agencies. *Department of Energy - [FY2006 Budget Request for] Science, Nuclear Energy, and Renewable Energy*. Hearing held March 15, 2005. [No hearing webcast has been posted to the web and no testimony has been published yet.]

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U.S. Congress. Senate. Committee on Energy and Natural Resources. *Power Generation Resource Incentives & Diversity Standards*. Hearing held March 8, 2005. [<http://energy.senate.gov/hearings/witnesslist.cfm?id=1403>]

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U.S. Congress. House. Committee on Science. *Improving the Nation's Energy Security: Can Cars and Trucks Be Made More Fuel Efficient?* Hearing held February 9, 2005.

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(Many hearings on Energy Efficiency and Renewable Energy held in the 108th Congress are listed on the DOE Office of Energy Efficiency and Renewable Energy website at [http://www.eere.energy.gov/office_eere/congressional_test.html].)

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CRS Issue Brief IB10041. *Renewable Energy: Tax Credit, Budget, and Electricity Production Issues*, by Fred Sissine.

CRS Report RL31205. *Energy Efficiency and Energy Conservation Legislation in the 107th Congress*, by Fred Sissine.

CRS Report RL31044. *Renewable Energy Legislation in the 107th Congress*, by Fred Sissine.