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## **Omnibus Energy Legislation (H.R. 6): Side-by-side Comparison of Non-tax Provisions**

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Mark Holt and Carol Glover, Coordinators  
Resources, Science, and Industry Division

# Omnibus Energy Legislation (H.R. 6): Side-by-side Comparison of Non-tax Provisions

## Summary

Continuing a legislative effort that began in the 107<sup>th</sup> Congress, the House and Senate in the first session of the 108<sup>th</sup> passed two distinct versions of an omnibus energy bill (H.R. 6), which would be the first comprehensive energy legislation in more than 10 years.

Although Republicans are in the majority in both chambers, the conference on H.R. 6 will be complicated by deep divisions within the Senate on energy policy. Facing numerous amendments and limited floor time, the Senate set aside the energy bill it had been considering in the 108<sup>th</sup> Congress (S. 14) and passed the text of last year's Senate energy bill (H.R. 4). Because last year's bill was passed when the Senate was under a Democratic majority, some Republican leaders have pledged to re-insert provisions from this year's S. 14 in conference.

The House version of H.R. 6, which passed April 11, 2003, includes a key component of the Bush Administration's energy strategy: opening the Arctic National Wildlife Refuge (ANWR) to oil and gas exploration and development — with a 2,000-acre limitation on production and support facilities. The Senate version, approved July 31, 2003, leaves ANWR off-limits to drilling.

The electricity provisions of H.R. 6 would continue to change the regulatory requirements for the wholesale electric market. In general, with some differences, both the House and Senate versions would repeal the Public Utility Holding Company Act (PUHCA) and give the Federal Energy Regulatory Commission (FERC) and state utility commissions access to utility books and records. Both would also repeal the mandatory purchase requirement of the Public Utility Regulatory Policies Act (PURPA) when a competitive electric market exists.

Automobile and light truck fuel efficiency was the subject of considerable debate in both houses. The Senate version would require development of new Corporate Average Fuel Economy (CAFE) standards, but it also would freeze "pickup trucks" at the current light truck standard of 20.7 mpg. The House version would authorize appropriations to NHTSA to conduct further rulemakings and would require a study of the feasibility and effects of reducing automobile fuel use.

The House version of H.R. 6 includes a renewable fuel standard (RFS) that would require the blending of 2.7 billion gallons of renewable fuel with gasoline in 2005. The required volume would rise to 5 billion gallons annually by 2015, while the Senate version would require that target to be met by 2012. Several other controversial environmental provisions are contained only in the Senate-passed bill, particularly programs to address global climate change and renewable energy requirements for electricity providers.

Tax provisions in the House and Senate bills are not included in this report.

No update of this report is planned.

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# Omnibus Energy Legislation (H.R. 6): Side-by-side Comparison of Non-tax Provisions

## Introduction

Continuing a legislative effort that began in the 107<sup>th</sup> Congress, the House and Senate in the first session of the 108<sup>th</sup> passed two distinct versions of an omnibus energy bill (H.R. 6), which would be the first comprehensive energy legislation in more than 10 years.

Although Republicans are in the majority in both chambers, the conference on H.R. 6 will be complicated by deep divisions within the Senate on energy policy. Facing numerous amendments and limited floor time, the Senate set aside the energy bill it had been considering in the 108<sup>th</sup> Congress (S. 14) and passed the text of last year's Senate energy bill. Because last year's bill was passed when the Senate was under a Democratic majority, some Republican leaders have pledged to re-insert provisions from this year's S. 14 in conference.

The House version of H.R. 6, which passed April 11, 2003, includes a key component of the Bush Administration's energy strategy: opening the Arctic National Wildlife Refuge (ANWR) to oil and gas exploration and development — with a 2,000-acre limitation on production and support facilities. The Senate version, approved July 31, 2003, leaves ANWR off-limits to drilling.

Both bills have extensive provisions to change the regulatory requirements for the wholesale electric market, including repeal of the Public Utility Holding Company Act (PUHCA). Both bills include provisions to address motor vehicle fuel economy, nuclear accident liability, and authorizations of energy research and development programs. Major provisions contained only in the Senate-passed bill include programs to address global climate change and renewable energy requirements for electricity providers (see Table 1).

This report summarizes the major non-tax provisions of the House- and Senate-passed bills, provides a detailed side-by-side comparison, and lists annual funding authorizations.

Tax provisions in the House and Senate bills are not included in this report.

## Major Provisions

**Arctic National Wildlife Refuge.** The congressional debate over whether to open the Arctic National Wildlife Refuge (ANWR) to oil and gas leasing has continued for more than 30 years. H.R. 6 as passed by the House would authorize oil and gas exploration, development, and production in ANWR, with a 2,000-acre limit on production and support facilities. Opponents of development in ANWR expressed concern that the 2,000 acres would be spread out over vast areas of the Refuge. The Senate-passed bill would keep ANWR closed to oil and gas activities.

Proponents of exploring ANWR point to advances in exploration and drilling technology and methods that have significantly reduced the extent of surface disturbance caused by oil and gas activities. While opponents concede this may be so, they argue that the bill does not impose adequate requirements in this regard, that surface disturbance represents only one of many environmental impacts, and that considerable risk to the environment remains during all phases of development. Some opponents, citing ANWR's pristine character, argue that its ecology and habitat should not be disturbed under any circumstances.

H.R. 6 was also amended on the floor to include language authorizing revenues from bonus bids for leases in ANWR to be appropriated to the Low Income Home Energy Assistance Program (LIHEAP). An amendment to strike the language authorizing leasing and exploration of ANWR was defeated (197-228). (For additional information, see CRS Issue Brief IB10111, *The Arctic National Wildlife Refuge: Controversies for the 108th Congress*, and CRS Report RL31115, *Legal Issues Related to Proposed Drilling for Oil and Gas in the Arctic National Wildlife Refuge*.)

**Electricity Regulation.** Historically, electric utilities have been regarded as natural monopolies requiring regulation at the state and federal levels. The Energy Policy Act of 1992 (EPACT, P.L. 102-486) removed a number of regulatory barriers to electricity generation in an effort to increase supply and introduce competition, but further legislation has been introduced and debated to resolve remaining issues affecting transmission, reliability, and other restructuring concerns.

Title VI of the House-passed H.R. 6 would, in part, provide for incentive-based transmission rates, allow transmission owners in certain instances to exercise the right of eminent domain to site new transmission lines, create an electric reliability organization, and give new, but limited, authority to the Federal Energy Regulatory Commission (FERC) over municipal and cooperative transmission systems.

In addition, the House bill would repeal the Public Utility Holding Company Act (PUHCA) and give FERC and state public utility commissions access to books and records, prospectively repeal the mandatory purchase requirement of the Public Utility Regulatory Policies Act of 1978 (PURPA), and require utilities to provide real-time rates and time-of-use metering. The House version of H.R. 6 would establish market transparency rules, explicitly prohibit round-trip trading, and significantly increase criminal penalties under the Federal Power Act.

In general, the Senate version of the energy bill would repeal PUHCA and give FERC and the state utility commissions access to utility books and records. It would also repeal the PURPA mandatory purchase requirement when FERC finds that a competitive electric market exists. In addition, the Senate-passed H.R. 6 would give FERC more review authority over certain electric utility mergers and increase the value of asset transfers that would trigger FERC review. It would require FERC to apply cost-of-service rates when market-based rates are unjust, unreasonable, unduly discriminatory or preferential; require an electric reliability organization to develop and enforce mandatory reliability standards; provide access to the transmission system for certain intermittent generators; create an Office of Consumer Advocacy within the Department of Justice; and give states the authority to prescribe and enforce laws regarding the application of the Consumer Protection Subtitle.

(For additional information, see CRS Issue Brief IB10006, *Electricity: The Road to Restructuring*, or see the CRS Electronic Briefing Book: Electric Utility Restructuring [<http://www.congress.gov/brbk/html/ebele1.shtml>].)

**Motor Vehicle Fuel Economy.** One of the first initiatives designed to have a significant effect on oil demand was passage of corporate average fuel economy standards (CAFE) in the Energy Policy and Conservation Act of 1975 (EPCA, P.L. 94-163). In the years since, there have been periodic calls for stiffening or broadening the CAFE standards — especially as consumer demand has turned more to light-duty trucks and sport utility vehicles (SUVs).

Higher CAFE standards for light-duty trucks were released April 1, 2003, by the National Highway Traffic Safety Administration (NHTSA), but congressional interest in the issue continues. The House version of H.R. 6 would authorize appropriations to NHTSA to conduct further rulemakings and would require a study on the feasibility and effects of reducing automobile fuel use. An amendment to require a 5% reduction in automotive fuel usage by 2010 was defeated (162-268) on the House floor.

The Senate language — originally passed before the latest NHTSA rulemaking — would require NHTSA to issue new CAFE standards, except for “pickup trucks.” The provision would freeze the standard for pickup trucks at 20.7 miles per gallon, the level in effect when the Senate first approved this language in 2002. The CAFE freeze on pickup trucks, which are undefined, could shift at least some of the burden for achieving fuel savings to the passenger automobile portion of the fleet.

(For additional information, see CRS Issue Brief IB90122, *Automobile and Light Truck Fuel Economy: The CAFE Standards*.)

**Nuclear Accident Liability.** Reauthorization of the Price-Anderson Act nuclear liability system is one of the top nuclear items on the energy agenda. Under Price-Anderson, commercial reactor accident damages are paid through a combination of private-sector insurance and a nuclear industry self-insurance system. Liability is capped at the maximum coverage available under the system, currently about \$10.9 billion. Price-Anderson also authorizes the Department of Energy (DOE) to indemnify its nuclear contractors. The limit on DOE contractor liability

is the same as for commercial reactors, except when the limit for commercial reactors drops because of a decline in the number of covered reactors.

The House version of H.R. 6 would extend Price-Anderson Act coverage through August 1, 2017, while the Senate version would extend coverage for new commercial reactors through August 1, 2012, and indefinitely extend DOE indemnification authority. In addition, the House bill would raise each reactor's maximum annual payment for accident damages from \$10 million to \$15 million and impose an inflation adjustment, while the Senate bill would leave the annual payment level unchanged.

There are also several House provisions not contained in the Senate bill, including a provision that would authorize the federal government to sue DOE contractors to recover at least some of the compensation that the government had paid for any accident caused by intentional DOE contractor management misconduct. Such cost recovery would be limited to the amount of the contractor's profit under the contract involved, and no recovery would be allowed from nonprofit contractors.

The nuclear industry contends that the system has worked well and should be continued, but opponents charge that Price-Anderson's liability limits provide an unwarranted subsidy to nuclear power. The House version of H.R. 6 would also require the Nuclear Regulatory Commission (NRC) to issue new regulations on nuclear power plant security and to conduct force-on-force security exercises. The proposed nuclear liability and security provisions are nearly identical to a Price-Anderson extension bill passed by the House in the 107th Congress (H.R. 2983).

(For more information, see CRS Issue Brief 88090, *Nuclear Energy Policy*.)

**Renewable Fuel Standard.** One of the most controversial provisions of the energy legislation is the establishment of a renewable fuel standard (RFS) intended to increase the use of ethanol and other renewable fuels. The provision was supported by the oil industry, ethanol producers, and environmental groups. However, critics argued that it would boost prices to consumers and create shortages.

The House version of H.R. 6 includes a renewable fuel standard (RFS) that would require the blending of 2.7 billion gallons of renewable fuel with gasoline in 2005. Most of this would be met with ethanol, but other renewable fuels, including biodiesel, would qualify. The required volume would rise to 5 billion gallons annually by 2015. Further, the House version would eliminate the current reformulated gasoline oxygen requirement.

The Senate version would also establish an RFS. The Senate RFS would be 2.3 billion gallons in 2004, increasing to 5.0 billion gallons in 2012. The Senate version would also eliminate the reformulated gasoline oxygen requirement. Further, the Senate version would ban the use of MTBE (a major competitor with ethanol) because of groundwater contamination. The House version would not ban MTBE.

In addition to the above provisions, both bills would shield renewable fuels suppliers and blenders from defective product liability. The House version would provide similar protection for MTBE.

(For additional information, see CRS Issue Brief IB10041, *Renewable Energy: Tax Credit, Budget and Electricity Production Issues*.)

**Renewable Energy and Efficiency.** The Senate version of H.R. 6 would require retail electricity suppliers (electric utilities, except for municipal and cooperative utilities) to obtain a minimum percentage of their power from a portfolio of new renewable energy resources. The minimum renewable energy target, or Renewable Portfolio Standard (RPS), would start at 1% in 2005, rise at a rate of about 1.2% every two years, and level off at 10% in 2019.

Eligible resources for the RPS include solar, wind, ocean, and geothermal energy, most forms of biomass, landfill gas, and incremental hydropower. Renewables used on site to reduce the measured demand from the grid (defined as a “generation offset”) would also be eligible. The base for calculating the target production level excludes power from eligible renewables, hydropower, and municipal solid waste. Thus, states with a large amount of existing biomass, hydro, or other renewable power generation would have a proportionately lower target for new generation. However, this aspect may be a focus of debate in conference.

Tradable credits would be created, which could be purchased in place of power from other suppliers. The credits would function like the Clean Air Act emission allowance trading system, which has lowered compliance costs for air pollution regulations. Electricity suppliers could “borrow” from expected future credits to fill a present shortfall or “carry forward” surplus credits to future years. A cost cap for the credits is set as the lesser of 1.5 cents/kilowatt-hour (kwh) or 200% of the average market value of the credits. The House version of H.R. 6 does not have an RPS provision.

Both the House and Senate versions direct DOE to issue a rule that “determines whether” an energy efficiency standard needs to be set for “standby mode” energy use by battery chargers and external power supplies. Further, DOE is directed to create voluntary programs to reduce standby mode energy use. Also, both versions legislate standards for illuminated exit signs, torchieres, distribution transformers, and traffic signal modules, and direct DOE to set standards by rulemaking for suspended ceiling fans, vending machines, commercial refrigerators and freezers, and unit heaters. Further, the Senate version directs DOE to “amend” the energy efficiency standard for central air conditioners and heat pumps. Also, both versions direct federal agencies to meet progressive annual 2% reductions in energy use by federal buildings that culminate in a 20% overall reduction over 10 years.

(For additional information, see CRS Issue Brief IB10020, *Budget, Oil Conservation and Electricity Conservation Issues*.)

## Overview of House and Senate Versions

The House and Senate versions of H.R. 6 generally address similar areas of energy policy, although there are significant differences. For example, only the House bill would open ANWR to oil and gas activities, and only the Senate version includes extensive provisions explicitly addressing global climate change. Table 1 briefly summarizes the major non-tax provisions of the House and Senate versions of H.R. 6.

**Table 1. Major Non-tax Provisions of House and Senate Energy Bills**

<b>Provision</b>	<b>House</b>	<b>Senate</b>
Electricity restructuring	Changes regulatory requirements to emphasize competitive market formation.	Changes regulatory requirements to emphasize competitive market formation.
Arctic National Wildlife Refuge (ANWR)	Opens ANWR to oil and gas leasing.	No provision.
Corporate Average Fuel Economy (CAFE)	Authorizes further CAFE rulemakings.	Requires new CAFE standards, except for pickup trucks.
Global climate change	No specific provisions.	Establishes federal offices to focus on global climate change, establishes a national greenhouse gas database, authorizes R&D.
Appliance efficiency standards	Requires new standards for appliance standby power and several other uses of electricity.	Requires new standards for central air conditioners, heat pumps, appliance standby power, and several other uses of electricity.
Nuclear accident liability (Price-Anderson Act)	Extends Price-Anderson coverage for new commercial reactors and DOE contracts. Includes nuclear security provisions.	Extends Price-Anderson coverage for new commercial reactors and DOE contracts.

<b>Provision</b>	<b>House</b>	<b>Senate</b>
Renewable energy content in motor vehicle fuel	Requires motor vehicle fuel sold in the United States to contain a minimum volume of ethanol or other renewable fuel.	Requires motor vehicle fuel sold in the United States to contain a minimum volume of ethanol or other renewable fuel, bans MTBE.
Renewable Portfolio Standard	No provisions.	Requires electric utilities to provide minimum percentages of power from new renewable sources.
Energy Program Authorizations, FY2002-FY2006	Authorizes \$48.7 billion (see Table 2).	Authorizes \$54.5 billion (see Table 3).

## Organization of Report

The remainder of this report provides a section-by-section summary comparison of the non-tax provisions of H.R. 6 as passed by the House and Senate. The sections are listed in numerical order as they appear in the House-passed version. Funding authorizations are shown in separate tables following the side-by-side tables. A numerical index of the Senate sections follows the authorization tables.

The following analysts in the CRS Resources, Science, and Industry Division contributed to this report:

- Amy Abel, electric utilities;
- Robert Bamberger, energy security;
- Lynne Corn, ANWR;
- Carol Glover, Native American energy, general authorizations;
- Mark Holt, nuclear energy;
- Marc Humphries, federal energy leasing, coal, ANWR;
- Larry Kumins, oil and gas, ANWR;
- Jim McCarthy, Clean Air Act and MTBE;
- Dan Morgan, science programs;
- Kyna Powers, hydropower;
- Fred Sissine, conservation and renewable energy;
- Brent Yacobucci, alternative fuels, climate change.

Provision	Current Law	House	Senate	Comments
<b>Energy policy.</b>	No provision.	<i>Sec. 2.</i> It is the sense of the Congress that the United States should take all actions necessary in the areas of conservation, efficiency, alternative source, technology development, and domestic production to reduce the United States' dependence on foreign energy sources from 58% to 45% by January 1, 2013.	No provision.	

### Short Title<sup>1</sup>

Provision	Current Law	House	Senate	Comments
<b>Short titles.</b>	No provision.	<i>Sec. 10001.</i> This division may be cited as the "Energy Policy Act of 2003."	<i>Sec. 1.</i> This Act may be cited as the "Energy Policy Act of 2003." <i>Sec. 2.</i> Table of Contents.	

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<sup>1</sup> Provisions are organized by House section numbers.

## Energy Conservation

### Federal Leadership in Energy Conservation

Provision	Current Law	House	Senate	Comments
<b>Energy and water saving measures in congressional buildings.</b>	Section 310 of the Legislative Branch Appropriations Act of 1999 called for the Architect of the Capitol (AOC) to develop an energy efficiency plan for congressional buildings.	<i>Sec. 11001.</i> The Architect of the Capitol is required to plan and implement an energy and water conservation strategy for congressional buildings that is consistent with that required of other federal buildings. An annual report is required. Up to \$2 million is authorized.	<i>Sec. 919.</i> The Architect of the Capitol is required to plan and implement an energy and water conservation strategy for congressional buildings that is consistent with that required of other federal buildings. No funding authorization specified.	
<b>Energy management requirements.</b>	Section 202 of Executive Order 13123 uses 1985 as the baseline for measuring federal building energy efficiency improvements and calls for a 35% reduction in energy use per gross square foot by 2010.	<i>Sec. 11002.</i> The baseline is updated from 1985 to FY2001 and a new goal of 20% reduction is set for 2013. At that time, DOE is directed to assess progress and set a new goal for 2023.	<i>Sec. 911.</i> The baseline is updated from 1985 to 2000 and a new goal of 20% reduction is set for 2011. At that time, DOE is directed to assess progress and set a new goal for 2021.	
<b>Energy use measurement and accountability.</b>	No existing requirement.	<i>Sec. 11003.</i> Federal buildings are required to be metered or sub-metered by late 2010, to help reduce energy costs and promote energy savings.	<i>Sec. 912.</i> Federal buildings are required to be metered or sub-metered by late 2004, to help reduce energy costs and promote energy savings.	

Provision	Current Law	House	Senate	Comments
<b>Fuel efficiency of the federal fleet of automobiles.</b>	Executive Order 13149, issued by President Clinton on April 21, 2000, directed that federal agencies increase the EPA-rated fuel economy of their new passenger cars by at least 1 mile per gallon (mpg) by the end of FY2002 and at least 3 mpg by FY2005 from a baseline of FY1999 acquisitions.	No similar provision.	<i>Sec. 821.</i> Executive agencies are required to increase the average fuel economy of their new vehicle purchases by 1 mile per gallon (mpg) in FY2002 and 3 mpg in FY2005, from a FY1999 baseline. This applies to passenger automobiles and light-duty trucks, but excludes vehicles used in combat-related missions, law enforcement, and emergency rescue work.	This provision largely codifies the existing executive order.
<b>Federal building performance standards.</b>	Mandatory energy efficiency performance standards for federal buildings are set in Section 305(a) of P.L. 94-385 and implemented through 10 CFR Part 435.	<i>Sec. 11004.</i> DOE is directed to set revised energy efficiency standards for new federal buildings, 30% below industry or international standards.	<i>Sec. 913.</i> DOE is directed to set revised energy efficiency standards for new federal buildings.	
<b>Procurement of energy efficient products.</b>  <b>Federal purchase requirement.</b>	Section 403 of Executive Order 13123 directs federal agencies to purchase life-cycle cost-effective Energy Star products.  No existing requirement.	<i>Sec. 11005.</i> Statutory authority is created that requires federal agencies to purchase Energy Star or energy efficient products designated by the Federal Energy Management Program (FEMP).	<i>Sec. 914.</i> Statutory authority is created that requires federal agencies to purchase Energy Star or energy efficient products designated by the Federal Energy Management Program (FEMP).  <i>Sec. 263.</i> Federal agencies are required to purchase power produced from renewables, starting at 3% in FY2003, and rising to 7.5% in FY2010.	

Provision	Current Law	House	Senate	Comments
<b>Energy savings performance contracts.</b>	Section 801(c) of the National Energy Conservation Policy Act (NECPA, P.L. 95-619) provides for federal use of energy savings performance contracts (ESPCs) through the end of FY2002.	<i>Sec. 11006.</i> Federal agencies are empowered to continue using energy savings performance contracts indefinitely.	<i>Sec. 915.</i> Same.	
<b>Energy savings performance contract definitions.</b>	Section 804(2) of NECPA provides definitions for ESPCs.	No similar provision.	<i>Sec. 916.</i> The definition of energy savings is expanded to include a reduction in water costs.	
<b>Review of energy savings performance contract program.</b>	No existing requirement.	No similar provision.	<i>Sec. 917.</i> DOE is required to report to Congress on barriers to the ESPC program and ways to improve its effectiveness.	
<b>Federal energy bank.</b>	No existing requirement.	No similar provision.	<i>Sec. 918.</i> A fund is established in the U.S. Treasury that can be used for loans to federal agencies for energy and/or water efficiency.	
<b>Voluntary commitments to reduce industrial energy intensity.</b>	While there is no current statutory authority, industry energy efficiency programs have been in place, such as the former Climate Wise program at the Environmental Protection Agency (EPA).	<i>Sec. 11007.</i> DOE is authorized to form voluntary agreements with industry sectors or companies to reduce energy use per unit of production by 2.5% per year.	<i>Sec. 921.</i> Same.	

Provision	Current Law	House	Senate	Comments
<b>Federal agency participation in demand reduction programs.</b>	Section 546(c) of NECPA authorizes and encourages federal agencies to participate in utility incentive programs to increase energy efficiency and water conservation.	<i>Sec. 11008.</i> Federal agencies are encouraged to participate in state and regional demand-side reduction programs.	No provision.	
<b>Advanced Building Efficiency Testbed.</b>	New program.	<i>Sec. 11009.</i> DOE is required to create a program to develop, test, and demonstrate advanced federal and private building efficiency technologies.	No provision.	
<b>Increased use of recovered mineral component in federally funded projects involving procurement of cement or concrete.</b>	No existing requirement.	<i>Sec. 11010.</i> Requires federally funded projects to increase the procurement of cement and concrete that uses recovered material.	<i>Sec. 920.</i> Same.	
<b>Use of photovoltaic energy in public buildings.</b>	No existing requirement.	<i>Sec. 11011.</i> The General Services Administration (GSA) is authorized to encourage use of photovoltaic solar energy systems in new and existing buildings.	No provision.	
<b>Telecommuting study.</b>	No existing requirement.	<i>Sec. 11012.</i> The Secretary of Energy shall study the energy conservation potential of telecommuting by federal employees.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Fuel efficiency of the federal fleet of automobiles.</b>	Executive Order 13149, issued by President Clinton on April 21, 2000, directed that federal agencies increase the EPA-rated fuel economy of their new passenger cars by at least 1 mile per gallon (mpg) by the end of FY2002 and at least 3 mpg by FY2005 from a baseline of FY1999 acquisitions.	No provision.	<i>Sec. 821.</i> Executive agencies are required to increase the average fuel economy of their new vehicle purchases by 1 mile per gallon (mpg) in FY2002 and 3 mpg in FY2005, from a FY1999 baseline. This applies to passenger automobiles and light-duty trucks, but excludes vehicles used in combat-related missions, law enforcement, and emergency rescue work.	These provisions largely codify the existing executive order.

## Energy Assistance and State Programs

Provision	Current Law	House	Senate	Comments
<b>LIHEAP and weatherization assistance.</b>	Department of Health and Human Services funding for the Low-Income Home Energy Assistance Program (LIHEAP) is currently authorized through FY2003 in the Human Services Authorization Act of 1998. DOE Weatherization Program funding is authorized through FY2003 under 42 U.S.C. 6872. DOE State Energy Program funding is authorized through FY2003 under 42 U.S.C. 6322.	<i>Sec. 11021.</i> Increased funding is authorized for LIHEAP and Weatherization grant programs for FY2004 through FY2006.	<i>Sec. 901.</i> Increased funding is authorized for LIHEAP and Weatherization grant programs for FY2003 through FY2005.	
<b>State energy programs.</b>	Authorization expired.	<i>Sec. 11022.</i> New requirements are set for state energy conservation goals and plans. Also, increased funding is authorized for FY2004 through FY2006 for DOE State Energy grant programs.	<i>Sec. 902.</i> Increased funding is authorized for FY2003 through FY2005 for the DOE State Energy grant programs. Also, new requirements are set for state energy conservation goals and plans.	
<b>Energy efficient appliance rebate programs.</b>	No existing program.	<i>Sec. 11023.</i> DOE is authorized to fund rebate programs in eligible states to support residential end-user purchases of Energy Star products.	<i>Sec. 905.</i> DOE is required to fund rebate programs in eligible states to support residential end-user purchases of Energy Star products.	

Provision	Current Law	House	Senate	Comments
<b>Energy-efficient public buildings.</b>	No existing program.	<i>Sec. 11024.</i> A grant program is created for energy-efficient renovation and construction of local government buildings.	<i>Sec. 903.</i> DOE is directed to create a High Performance Schools Program, a grant program for using energy-efficient measures in the renovation and construction of schools.	
<b>Low income community energy-efficiency pilot program.</b>	No existing program.	<i>Sec. 11025.</i> A pilot energy-efficiency program is created for local governments, community development corporations, and Native American economic development entities.	<i>Sec. 904.</i> A pilot energy-efficiency program is created for community development corporations and Native American economic development entities.	
<b>Consumer Energy Commission.</b>	No provision.	No provision.	<i>Sec. 1705.</i> An 11-member commission is established to study energy price spikes since 1990. First meeting is to be held not more than 60 days after enactment; report is called for in 180 days.	

## Energy Efficient Products

Provision	Current Law	House	Senate	Comments
<b>Energy Star program.</b>	Section 403 of Executive Order 13123 directs federal agencies to purchase life-cycle cost-effective Energy Star products.	<i>Sec. 11041.</i> DOE and EPA are given statutory authority for the Energy Star program.	<i>Sec. 926.</i> DOE and EPA are given statutory authority for the Energy Star program.	

Provision	Current Law	House	Senate	Comments
<b>Consumer education on energy efficiency benefits of air conditioning, heating, and ventilation maintenance.</b>	No existing program.	<i>Sec. 11042.</i> DOE is required to implement a public education program for homeowners and small businesses that explains the energy-saving benefits of improved maintenance for certain equipment. Also, the Small Business Administration is directed to assist small businesses in becoming more energy efficient.	<i>Sec. 929.</i> A public education program is authorized that would address the energy-saving benefits of improved maintenance for certain equipment. Also, the Small Business Administration is directed to assist small businesses in becoming more energy efficient.	
<b>Additional definitions.</b>	Energy terms are defined in various statutes.	<i>Sec. 11043.</i> Definitions are provided for several types of home appliances, consumer products, and energy-using equipment.	<i>Sec. 923.</i> Terms are defined for provisions in the subsequent sections.	
<b>Additional test procedures.</b>	No existing requirement.	<i>Sec. 11044.</i> Procedures are prescribed for testing the energy efficiency of several types of consumer and commercial products.	<i>Sec. 924.</i> Test procedures are prescribed for exit signs, traffic signals, and transformers, and DOE is directed to set procedures for ceiling fans, vending machines, and commercial refrigerators.	

Provision	Current Law	House	Senate	Comments
<b>Energy conservation standards for additional consumer and commercial products.</b>	There are no existing requirements for standby mode nor for the additional products identified.	<i>Sec. 11045.</i> DOE is directed to issue a rule that determines whether efficiency standards shall be set for standby mode in battery chargers and external power supplies. Energy efficiency standards are set by statute for exit signs, traffic signals, torchieres, and distribution transformers. Also, DOE is directed to issue a rule that prescribes efficiency standards for ceiling fans, vending machines, commercial refrigerators and freezers, and unit heaters.	<i>Sec. 922.</i> DOE is authorized to set energy efficiency standards for commercial appliances and products.  <i>Sec. 928.</i> DOE is directed to issue a rule that determines whether an energy efficiency standard needs to be set for the standby operating mode of certain appliances.	
<b>Energy labeling.</b>	Section 324(a) of the Energy Policy and Conservation Act (P.L. 94-163) directed the Federal Trade Commission (FTC) to issue a rule for energy efficiency labels on consumer products (42 U.S.C. 6294).	<i>Sec. 11046.</i> FTC is required to issue a rule that addresses changes to improve the effectiveness of energy labels for consumer products. Also, DOE or FTC is directed to prescribe labeling requirements for products added by this section of the bill.	<i>Sec. 925.</i> FTC is required to issue a rule that addresses changes to improve the effectiveness of energy labels. Also, DOE is directed to prescribe labeling requirements for products added by this title of the bill.	
<b>Energy conservation standards for central air conditioners and heat pumps.</b>	Section 546(c) of NECPA, as implemented by 10 CFR, sets a seasonal energy efficiency ratio (SEER) standard of 10 for central air conditioners and heat pumps.	No similar provision	<i>Sec. 927.</i> DOE is directed to amend the standard within 60 days after enactment.	A DOE rulemaking late in the Clinton Administration set the standard to a SEER of 13. Early in the Bush Administration a new DOE rulemaking rescinded the previous one and proposed a SEER of 12.

Provision	Current Law	House	Senate	Comments
<b>Study of energy efficiency standards.</b>	No existing provision.	<i>Sec. 11047.</i> DOE is directed to have the National Academy of Sciences (NAS) study how the effectiveness of standards may be influenced by measures that focus either on energy end-use or on the full fuel cycle.	<i>Sec. 930.</i> DOE is directed to have NAS study how the effectiveness of standards may be influenced by measures that focus either on energy end-use or on the full fuel cycle.	

## Oil and Gas

### Alaska Natural Gas Pipeline

Provision	Current Law	House	Senate	Comments
<b>Short title.</b>	The Natural Gas Act (NGA) gives FERC authority to certificate interstate pipelines. The Alaska Natural Gas Transportation Act (ANGTA), 15 U.S.C. 719, creates a process where a project in the Alaska Natural Gas Transportation System may be recommended and approved.	<i>Sec. 12001.</i> Short Title is “Alaska Natural Gas Pipeline Act of 2003.”	<i>Secs. 701 and 703.</i> This subtitle may be called the “Alaska Natural Gas Pipeline Act of 2003.” Its purpose is to expedite the completion of one or more pipelines to deliver Alaskan natural gas to the contiguous 48 states.	

CRS-19

Provision	Current Law	House	Senate	Comments
<b>Findings and purposes.</b>	No provision.	<i>Sec. 12002.</i> The pipeline is in the national interest and fosters energy security. The purpose of the bill is to provide the project with an alternative statutory framework to that of the Alaska Natural Gas Transportation Act of 1976 (ANGTA), which remains in effect.	<i>Sec. 702.</i> North Slope gas supply is declared to be in the national interest.	While ANGTA remains in effect, there has been scant progress in many years. The bill would offer a fast track regulatory process, in addition to reinforcing longstanding plans for the Alaska Highway route.  FERC has issued a certificate for the Alaska Gas Transport System
<b>Definitions.</b>	No provision.	<i>Sec. 12003.</i> “Alaska natural gas” is gas derived from north of 64 degrees North latitude, and the “Alaska natural gas transportation project” is a pipeline that carries Alaska gas to the Alaska-Canada border.	<i>Sec. 713.</i> This section defines the concept of Alaska natural gas as applying to the North Slope, including the Continental Shelf. It also defines the pipeline system as that part within the United States, and subject to FERC jurisdiction.	This language defines Alaska North Slope (ANS) gas in such a way as to preclude a northern route under the Beaufort Sea to Canada’s Mackenzie Delta.
<b>Issuance of certificate of public convenience and necessity.</b>	No specific provision.	<i>Sec. 12004.</i> The Federal Energy Regulatory Commission (FERC) must issue a certificate within 60 days to an applicant meeting the requirements of the Natural Gas Act (NGA), based on public need and adequate capacity on the delivery end of the Alaska pipeline. A proposed Northern route is denied certification.	<i>Sec. 704(d).</i> No federal approval may be granted for any natural gas pipeline transiting submerged lands or the shoreline of the Beaufort Sea, or for any gas pipeline crossing the U.S.-Canadian border north of 68 degrees north latitude.	This fast-tracks the regulatory process and excludes the Beaufort Sea proposal, which would aid Canadian Arctic gas development.

CRS-20

Provision	Current Law	House	Senate	Comments
<b>Environmental reviews.</b>	The National Environmental Policy Act (NEPA) calls for environmental review and analysis.	<i>Sec. 12005.</i> Certification of this project would be a major federal action NEPA. FERC is designated as the lead agency, preparing an environmental impact statement and coordinating other agencies' activities. FERC is directed to issue a draft statement within 12 months.	<i>Sec. 705.</i> FERC is designated as the lead agency for environmental reviews of an Alaska gas pipeline. FERC must issue a draft environmental impact statement (EIS) within 12 months after determining the pipeline certificate application is complete. The final EIS is to be issued 6 months after the draft statement.	
<b>Pipeline expansion.</b>	No specific provision.	<i>Sec. 12006.</i> FERC must assure that shipping rates for expanded capacity would not result in subsidization of expansion shippers by existing shippers. Such rates must ensure that the added capacity would not jeopardize pipeline economics or environmental and operational aspects.	<i>Sec. 706.</i> FERC has authority to order pipeline expansion, contingent upon approved tariffs and firm shipper agreement.	

Provision	Current Law	House	Senate	Comments
<b>Federal coordinator and expedited certification.</b>	ANGTA, NGA both address certification procedures.	<i>Sec. 12007.</i> A Federal Coordinator, appointed by the President, is established to ensure that federal agencies expeditiously discharge responsibilities for the pipeline.	<i>Sec. 704.</i> FERC must issue a certificate for a proposed Alaskan gas pipeline based on Natural Gas Act criteria, notwithstanding the Alaska Natural Gas Transportation Act. A certificate must be issued within 60 days of a final environmental impact statement.  <i>Sec. 707.</i> A new executive branch office, the Federal Coordinator for Alaska Natural Gas Transport Projects, is established to coordinate the expeditious discharge of all federal agency activities and compliance with this act.	
<b>Judicial review.</b>	No provision.	<i>Sec. 12008.</i> Disputes under this law must be adjudicated in the U.S. Court of Appeals for the D.C. Circuit.	<i>Sec. 708.</i> Legal challenge to agency actions under this bill are directed to the U.S. Court of Appeals for the D.C. Circuit.	
<b>State jurisdiction over in-state delivery of natural gas.</b>	No provision.	<i>Sec. 12009.</i> Alaska shall retain jurisdiction over gas sold within the state, as well as future intra-state pipelines.	<i>Sec. 709.</i> Intrastate gas deliveries will not be regulated by FERC.	This offers Alaskan consumers the right of first refusal.

CRS-22

Provision	Current Law	House	Senate	Comments
<b>Study of alternative means of construction.</b>	No provision.	<i>Sec. 12010.</i> If no application for a certificate is filed within 18 months, the Secretary of Energy will study pipeline alternatives and report the findings to Congress.	<i>Sec. 711.</i> If no commercial pipeline application is filed within 18 months of enactment, DOE is instructed to conduct a study of having the project undertaken by a government corporation.	
<b>Loan guarantee.</b>	No provision.	No provision.	<i>Sec. 710.</i> Loan guarantees of up to \$10 billion are provided for an Alaska gas transport system certified by FERC. Project sponsors are required to “put 20% down”; other terms and conditions are to be worked out by the Secretary of Energy.	
<b>Clarification of ANGTA status and authorities.</b>	No provision.	<i>Sec. 12011.</i> FERC may modify permits but not change the fundamental nature of the pipeline as designated in the President’s decision under ANGTA.	<i>Sec. 712.</i> Nothing in this bill affects ANGTA. DOE has authority to amend existing transport plan to bring it up to date.	
<b>Sense of Congress.</b>	No provision.	<i>Sec. 12012.</i> It is the sense of Congress that the pipeline will provide significant economic benefits to the United States and Canada.	<i>Sec. 714.</i> It is the sense of the Senate that commercial-ization of Alaskan gas is economically important to both the United States and Canada. It is urged that North American steel be used in pipeline construction, and that the project sponsors negotiate a project labor agreement to expedite construction.	

## CRS-23

Provision	Current Law	House	Senate	Comments
<b>Participation of small business concerns.</b>	No provision.	<i>Sec. 12013.</i> It is the sense of Congress that small business concerns should participate to the maximum extent possible. The General Accounting Office (GAO) shall study small business participation and report to Congress 1 year after enactment, and at least once every 5 years thereafter.	No provision.	
<b>Alaska pipeline construction training program.</b>	A workforce investment system has been established in the State of Alaska under the Workforce Investment Act of 1998 (112 Stat. 936 et seq.).	<i>Sec. 12014.</i> The Secretary of Labor is authorized to make grants through the Alaska workforce development system to train workers for gas pipeline jobs.	<i>Sec. 715.</i> The Secretary of Labor is to report to Congress within 6 months on the training requirements needed for Alaska residents to participate in pipeline construction. The Secretary is tasked with establishing such program within 1 year of the report.	

## Strategic Petroleum Reserve

Provision	Current Law	House	Senate	Comments
<b>Full capacity of Strategic Petroleum Reserve.</b>	The Administration currently is seeking, subject to market conditions, to fill the Strategic Petroleum Reserve (SPR) to its current capacity of 700 million barrels as expeditiously as possible.	<i>Sec. 12101.</i> The SPR must be filled to its current capacity “by the most practicable and cost-effective means,” including collection of royalty-in-kind oil. The fill rate should have a minimum effect on oil markets.	<i>Sec. 609.</i> The President must fill the SPR to its current capacity “as soon as practicable” by the “most practicable and cost-effective means.”	
<b>Strategic Petroleum Reserve expansion.</b>	No provision.	<i>Sec. 12102.</i> The Secretary of Energy must transmit a plan to Congress for expansion of the SPR to 1 billion barrels. Following the plan, the Secretary is to acquire property and build the additional capacity, for which the legislation would authorize \$1.5 billion.	No comparable provision.	
<b>Permanent authority to operate the Strategic Petroleum Reserve and other energy programs.</b>	SPR operating authority expires at the end of FY2003 under the Energy Policy and Conservation Act (EPCA, P.L. 94-163).	<i>Sec. 12103.</i> Authorization of the Strategic Petroleum Reserve is made permanent, subject to appropriations. This eliminates the need for periodic reauthorization.	<i>Sec. 601.</i> Authorization of the Strategic Petroleum Reserve is made permanent, subject to appropriations. This eliminates the need for periodic reauthorization.	This provision would avoid periods such as was experienced in 2000, when authorization expired at the end of March and Congress was unable to reach agreement on reauthorization until November.

## Hydraulic Fracturing

Provision	Current Law	House	Senate	Comments
<p><b>Hydraulic fracturing.</b></p>	<p>The Safe Drinking Water Act (SDWA) requires controls on underground injection of fluids to protect sources of drinking water (42 U.S.C. 300h-300h-5). The Act defines the term “underground injection” to mean the subsurface emplacement of fluids by well injection, not including the underground injection of natural gas for purposes of storage.</p>	<p><i>Sec. 12201.</i> SDWA’s definition of “underground injection” (42 U.S.C. 300h(d)) is amended to exclude the injection of hydraulic fracturing fluids for oil and gas production.</p>	<p><i>Sec. 610.</i> EPA is required to conduct a study of the effects of hydraulic fracturing of hydrocarbon-bearing geologic formations on underground sources of drinking water and determine whether regulation is necessary. If regulations are deemed unnecessary, states will be relieved from further obligation to regulate hydraulic fracturing.</p>	<p>Hydraulic fracturing involves the injection of fluids into underground formations to enhance the recovery of oil and natural gas. EPA has not considered hydraulic fracturing to fall within the regulatory definition of “underground injection,” having interpreted it to encompass only those wells whose “principal function” is the underground emplacement of fluids. In 1997, the U.S. Court of Appeals, 11th Circuit, found EPA’s interpretation of underground injection inconsistent with the language of the statute, thus opening hydraulic fracturing to regulation under SDWA. The House provision explicitly excludes hydraulic fracturing from the definition of “underground injection.”</p>

## Unproven Oil and Natural Gas Reserves Recovery Program

Provision	Current Law	House	Senate	Comments
<b>Program.</b>	No provision.	<i>Sec. 12301.</i> DOE shall conduct a technology demonstration program for certain oil and gas reservoirs.	No provision.	“Secondary recovery” of oil from depleted reservoirs may become an important component of domestic supply.
<b>Eligible reservoirs.</b>	No provision.	<i>Sec. 12302.</i> Demonstration reservoirs are those having complex geology or low pressure, or found in tight sands, coal seams, or shales.	No provision.	
<b>Focus areas.</b>	No provision.	<i>Sec. 12303.</i> Focus areas for the program include coal-seams, tight sands, deep wells, directionally drilled wells, and enhanced recovery techniques.	No provision.	
<b>Limitation on location of activities.</b>	No provision.	<i>Sec. 12304.</i> Programs are limited to onshore U.S. sites.	No provision.	
<b>Program administration.</b>	No provision.	<i>Sec. 12305.</i> Full responsibility for this program rests with the Secretary of Energy, who shall contract with a consortium to manage awards and make project recommendations.	No provision.	

## CRS-27

Provision	Current Law	House	Senate	Comments
<b>Advisory Committee.</b>	No provision.	<i>Sec. 12306.</i> The Secretary shall establish an advisory committee not later than 270 days after enactment.	No provision.	
<b>Limits on participation.</b>	No provision.	<i>Sec. 12307.</i> Only U.S.-owned entities with production of less than 1,000 barrels per day of oil equivalent are eligible for the demonstration program, unless it is otherwise in the U.S. economic interest.	No provision.	
<b>Payments to federal government.</b>	No provision.	<i>Sec. 12308.</i> 95% of each demonstration project's revenues must go to the federal government until the project's grant is fully repaid. After the grant is repaid, the federal government will continue to receive 5% of the project's revenues.	No provision.	
<b>Authorization of appropriations.</b>	No provision.	<i>Sec. 12309.</i> \$100 million is authorized, to remain available until expended.	No provision.	
<b>Public availability of project results and methodologies.</b>	No provision.	<i>Sec. 12310.</i> Results of projects are to be made public.	No provision.	
<b>Sunset.</b>	No provision.	<i>Sec. 12311.</i> September 30, 2010, marks the end of program authority.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	No provision.	<i>Sec. 12312.</i> “Program consortium” and other terms are defined.	No provision.	

## Miscellaneous

Provision	Current Law	House	Senate	Comments
<b>Appeals relating to pipeline construction projects.</b>	No coordination mechanism exists linking proceedings under NGA and other laws bearing on pipeline construction issues. Each agency having jurisdiction proceeds at its own pace.	<i>Sec. 12401.</i> For appeals about pipeline construction proceedings made under laws other than NGA, agencies are to use records compiled by FERC exclusively, and not hold a new evidentiary hearing. It is the sense of Congress that other federal and state agencies should coordinate proceedings with FERC’s.	No provision.	Attempts to keep project on fast track by avoiding redundant evidentiary hearings.
<b>Natural gas market data transparency.</b>	No provision.	<i>Sec. 12402.</i> FERC is to establish an electronic information system providing public access to interstate gas trading data (e.g.: price, size, quantity, time of trade, etc.), such that markets operate with reliable information.	No provision.	Addresses post-ENRON need for confidence in gas markets. Would establish a transparent open access marketplace where gas could be traded free of manipulation.

Provision	Current Law	House	Senate	Comments
<b>Oil and gas exploration and production defined.</b>	The term “oil and gas exploration and production” is used in section 502 of the Federal Water Pollution Control Act (33 U.S.C. 1362).	<i>Sec. 12403.</i> “Oil and gas exploration and production,” as used in the Federal Water Pollution Control Act, includes all drill-site activity, including preparation.	No provision.	
<b>R&amp;D for remediation of groundwater from energy activities.</b>	No specific provision.	No provision.	<i>Sec. 1262.</i> DOE shall conduct research to improve methods for environmental restoration of groundwater contaminated by oil and gas production and other energy activities. Annual funding of \$10 million is authorized for FY2003 through 2006.	
<b>Complex well technology testing facility.</b>	No provision.	<i>Sec. 12404.</i> DOE shall establish a Complex Well Technology Testing Facility at the Rocky Mountain Oilfield Testing Center to increase the range of drilling capability to 50,000 feet.	No provision.	
<b>Pipeline Safety Improvement Act of 2002.</b>	Provisions for pipeline safety and security are found at 49 U.S.C 60101.	No provision.	<i>Sec. 741 -783.</i> the “Pipeline Safety Improvement Act of 2003.”	This portion of the bill was largely enacted into law as P.L. 107-355, signed December 17, 2002.

Provision	Current Law	House	Senate	Comments
<b>Energy infrastructure across the Great Lakes.</b>	No provision.	No provision.	<i>Sec. 1706.</i> The Secretary of Energy is to conduct a study of the environmental impacts of any energy infrastructure (including gas pipelines) transiting the Lakes and how they might be minimized. An NAS advisory committee shall be established.	

## Hydroelectric

### Alternative Conditions

Provision	Current Law	House	Senate	Comments
<p><b>Alternative conditions and fishways (continued in next row).</b></p>	<p>The Federal Power Act (FPA, 16 U.S.C. 791a, et seq.) authorizes the Federal Power Commission, later renamed the Federal Energy Regulatory Commission (FERC), to license non-federal hydropower facilities. Sections 4(e) and 18 of the Federal Power Act authorize certain federal agencies to impose conditions or prescribe fishway construction on hydropower license applicants.</p>	<p><i>Sec. 13001.</i> Agencies imposing conditions or prescribing fishway construction on hydropower license applicants under Section 4(e) and Section 18 of the Federal Power Act must consider alternative measures proposed by the applicant, and accept those alternative measures if they “will be no less protective of the fish resources than the fishway initially prescribed,” and would either cost less or result in more power production. (Continued in next row.)</p>	<p><i>Sec. 301 (a) and (b).</i> Agencies imposing conditions or prescribing fishway construction on hydropower license applicants under Section 4(e) and Section 18 of the Federal Power Act must consider alternative measures proposed by the applicant, and accept those alternative measures if the alternative condition “provides for the adequate protection and utilization of the reservation,” or if the alternative fishway “will be no less (Continued in next row.)</p>	<p>See CRS Issue Brief IB10122 <i>Hydropower License Conditions and the Relicensing Process.</i></p>

Provision	Current Law	House	Senate	Comments
<b>Alternative conditions and fishways (continued from row above).</b>	(See row above.)	<i>Sec. 13001.</i> (continued from row above) When issuing a condition, the agency must give equal consideration to the effects of each condition on energy supply, distribution, cost, and use; flood control; navigation; water supply; and air quality (in addition to the preservation of other aspects of environmental quality). FERC may refer the agency's decision to the Commission's Dispute Resolution Service (DRS). The DRS issues a non-binding advisory. No provision in this section prohibits other interested parties from proposing alternative conditions.	(continued from row above) protective of the fish resources than the fishway initially prescribed," and would either cost less or result in more power production. No provision in this section prohibits other interested parties from proposing alternative conditions.	(See row above.)
<b>Time of filing application.</b>	License applicants must file 24 months prior to expiration of old license (16 U.S.C. 808(c)(1)).	No provision.	<i>Sec. 301 (c).</i> License applicants must file 36 months prior to expiration for licenses that expire in 2008 and thereafter.	This provision is aimed at reducing the number of annual interim licenses that "do not provide certainty for consumers or the utility and result in delays in environmental mitigation and enhancement," according to Senator Smith.

## Additional Hydropower

Provision	Current Law	House	Senate	Comments
<b>Hydroelectric production incentives.</b>	No provision.	<i>Sec. 13201.</i> The Secretary of Energy shall make incentive payments to non-federal owners or operators of hydroelectric generating facilities added to existing dams or conduits within 10 years of the date of enactment. Payments of 1.8 cents per kwh, up to a total of \$750,000/year per facility, may be made for up to 10 fiscal years after a facility begins operating.	<i>Sec. 261.</i> Eligibility is extended to certain public utilities. Qualifying resources are expanded to include landfill gas, incremental hydro, and ocean energy. Funding for hydro may not exceed 30% of the total (also similar to <i>Sec. 16072</i> ).	
<b>Hydroelectric efficiency improvement.</b>	No provision.	<i>Sec. 13202.</i> The Secretary of Energy shall make incentive payments to the owners or operators of hydroelectric facilities who make capital improvements on existing facilities that improve efficiency by at least 3%. Payments shall not exceed 10% of the improvement cost and shall not exceed \$750,000 at any single facility.	No provision.	
<b>Small hydroelectric power projects.</b>	The Public Utility Regulatory Policies Act of 1978 defines existing dams as those completed by April 20, 1977 (PURPA, 16 U.S.C. 2078).	<i>Sec. 13203.</i> The date on or before which a dam must be constructed to qualify as an existing dam is changed to March 4, 2003.	No provision.	

Provision	Current Law	House	Senate	Comments
<p><b>Increased hydroelectric generation at existing federal facilities.</b></p>	<p>No provision.</p>	<p><i>Sec. 13204.</i> Within 2 years after the date of enactment, the Secretary of Energy will submit studies, for each water basin, that identify and describe: 1) opportunities to improve efficiency of hydropower generation, 2) opportunities to improve efficiency of the use of water supplied or regulated by federal projects, 3) opportunities to create additional hydropower generating capacity at existing facilities, and 3) a preliminary assessment of the costs, and economic and environmental consequences, of such measures. The Secretary of Energy may choose not to perform new studies when recent studies exist.</p>	<p>No provision.</p>	

## Nuclear Matters

### Price-Anderson Act Amendments

Provision	Current Law	House	Senate	Comments
<b>Short title.</b>	The Price-Anderson Act, dealing with liability for nuclear accidents, generally consists of Sec. 170 of the Atomic Energy Act of 1954 (AEA, 42 U.S.C. 2210). Key terms are defined at 42 U.S.C. 2014.	<i>Sec. 14001.</i> This subtitle (sections 14001-14015) may be cited as the “Price-Anderson Amendments Act of 2003.”	<i>Sec. 501.</i> This subtitle (sections 501-509) may be cited as the “Price-Anderson Amendments Act of 2003.”	
<b>Extension of indemnification authority for NRC licensees.</b>	Nuclear Regulatory Commission (NRC) authority to provide indemnification under Price-Anderson to new reactors and other licensees expires December 31, 2003 (AEA Sec. 170 c.).	<i>Sec. 14002(a).</i> NRC indemnification authority is extended through August 1, 2017.	<i>Secs. 502(a).</i> NRC indemnification authority is extended through August 1, 2012.	Without the extension, existing reactors would continue to be covered by Price-Anderson, but new reactors would not.
<b>Extension of indemnification authority for DOE contractors.</b>	DOE authority to indemnify nuclear contractors against radiological damage claims by members of the public expires December 31, 2004 (AEA Sec. 170 d.).	<i>Sec. 14002(b).</i> DOE’s indemnification authority is extended through August 1, 2017.	<i>Sec. 502(b).</i> DOE’s indemnification authority is extended indefinitely.	Without an extension, new DOE contracts would not include Price-Anderson indemnification, although existing contracts would still be covered.
<b>Extension of indemnification authority for nonprofit educational institutions.</b>	NRC authority to indemnify nonprofit educational institutions expired August 1, 2002 (AEA Sec. 170 k).	<i>Sec. 14002(c).</i> NRC indemnification authority for nonprofit educational institutions is extended through August 1, 2017.	<i>Secs. 502(c).</i> NRC indemnification authority for nonprofit educational institutions is extended through August 1, 2012.	Without an extension, new NRC reactor licenses for nonprofit educational institutions are not covered, but coverage continues for licenses issued before August 1, 2002.

Provision	Current Law	House	Senate	Comments
<b>Maximum commercial reactor assessment.</b>	The commercial reactor liability limit is equal to the maximum available liability insurance, plus maximum contributions of \$63 million per reactor (adjusted for inflation since 1988), plus a 5% surcharge, currently totaling about \$10.9 billion. Compensation contributions are paid at a rate of no more than \$10 million per reactor per year (AEA Sec. 170 b.).	<i>Sec. 14003.</i> Maximum total contributions by each commercial reactor following an accident are raised to \$94 million (to be adjusted for inflation every five years after enactment). Maximum annual contributions per reactor are raised from \$10 million to \$15 million, to be adjusted for inflation.	No provision.	Total available reactor incident compensation increases would be about \$10 billion under the House provision.
<b>Department of Energy liability limit.</b>	The liability limit for public damages resulting from a nuclear incident by a DOE contractor is about \$9.5 billion. The contractor liability limit is based on the limit for commercial nuclear reactors (AEA Sec. 170 d.).	<i>Sec. 14004.</i> The DOE contractor liability limit is raised to \$10 billion, subject to an inflation adjustment under Section 14007.	<i>Sec. 503.</i> The DOE contractor liability limit is raised to \$10 billion, subject to an inflation adjustment under Section 506.	
<b>Incidents outside the United States.</b>	The liability limit for nuclear incidents outside the United States is \$100 million (AEA Sec. 170 d., e.).	<i>Sec. 14005.</i> The limit is raised to \$500 million.	<i>Sec. 504.</i> The limit is raised to \$500 million.	
<b>Reports on Price-Anderson extension or modification.</b>	No future reports on this subject required.	<i>Sec. 14006.</i> DOE and the Nuclear Regulatory Commission (NRC) shall submit reports to Congress by August 1, 2013, to recommend continuation or modification of the Price-Anderson Act.	<i>Sec. 505.</i> DOE and the Nuclear Regulatory Commission (NRC) shall submit reports to Congress by August 1, 2008, to recommend continuation or modification of the Price-Anderson Act.	

Provision	Current Law	House	Senate	Comments
<b>Inflation adjustment.</b>	Every five years NRC must adjust for inflation, using the aggregate percentage change in the Consumer Price Index, the maximum compensation contribution that each reactor must make following a nuclear incident (AEA Sec. 170 t.). If the NRC inflation adjustment raises the reactor liability limit above the existing DOE contractor limit, the contractor limit is raised to the same level (AEA Sec. 170 d.).	<i>Sec. 14007.</i> In addition to the NRC inflation adjustment, DOE must make a similar adjustment of the \$10 billion nuclear contractor accident liability limit every five years.	<i>Sec. 506.</i> In addition to the NRC inflation adjustment, DOE must make a similar adjustment of the \$10 billion nuclear contractor accident liability limit every five years.	Both versions would eliminate the existing link between the commercial reactor and DOE contractor liability limits, requiring a separate inflation adjustment for DOE contractors.
<b>Price-Anderson treatment of modular reactors.</b>	All commercial nuclear reactors with electric generating capacity of 100 megawatts or more are subject to Price-Anderson's maximum payments for accident damages and requirements for insurance coverage (AEA Sec. 170 b.).	<i>Sec. 14008.</i> Two or more reactors at a single site, each with electric generating capacity of 100-300 megawatts and totaling no more than 1,300 megawatts, shall be treated as a single reactor in assessing accident compensation contributions and insurance requirements.	<i>Sec. 508.</i> Two or more reactors at a single site, each with electric generating capacity of 100-300 megawatts and totaling no more than 1,300 megawatts, shall be treated as a single reactor in assessing accident compensation contributions and insurance requirements.	This provision would allow a "modular" nuclear plant made up of several small reactors to purchase insurance coverage as if the plant consisted of a single reactor. The entire modular plant also would only be liable for the accident compensation payments of a single reactor.
<b>Effective date.</b>	No provision.	<i>Sec. 14009.</i> The increased nuclear liability limits in this subsection shall apply only to accidents that occur after the date of enactment.	<i>Sec. 509.</i> The increased nuclear liability limits in this subsection shall apply only to accidents that occur after the date of enactment.	

Provision	Current Law	House	Senate	Comments
<b>Prohibition on assumption by United States Government of liability for certain foreign accidents.</b>	No provision.	<i>Sec. 14010.</i> The federal government may not accept liability for nuclear accidents in nations found to support terrorism.	No provision.	
<b>Secure transfer of nuclear materials.</b>	No provision.	<i>Sec. 14011.</i> Nuclear materials transferred from NRC- or state-licensed facilities, or from countries with U.S. nuclear cooperation agreements, must be accompanied by a shipping manifest. Every worker involved in such shipments must have undergone a federal security background check. Such materials may be shipped only to licensed facilities, other “appropriate” federal facilities, or countries with U.S. nuclear cooperation agreements.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Nuclear facility threats.</b>	AEA provides general authority for NRC security regulation.	<i>Sec. 14012.</i> In consultation with NRC and other appropriate federal agencies, the President shall identify specific types of security threats to nuclear facilities. The President shall issue a report on actions taken or to be taken to address the identified threats, and NRC shall issue regulations to protect against the threats. NRC shall periodically conduct force-on-force exercises to test nuclear facility security. Release of security information shall be controlled, consistent with AEA requirements.	No provision.	
<b>Unreasonable risk consultation.</b>	No provision.	<i>Sec. 14013.</i> Before providing Price-Anderson coverage to a new reactor, NRC must consult with the Secretary of Homeland Security about whether the reactor's design and location provide adequate public protection in case of a terrorist attack. Before renewing a nuclear plant license, NRC must consult with the Secretary of Homeland Security about the plant's evacuation planning.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Recovery of payments for intentional DOE contractor misconduct.</b>	No provision.	<i>Sec. 14014.</i> If DOE has to pay compensation for an accident caused by the intentional misconduct of a for-profit contractor, the Attorney General may file a lawsuit to recover such compensation from the contractor, up to the amount of profit earned on the contract.	No provision.	
<b>Civil penalties for DOE nuclear contractors.</b>	Specific nonprofit DOE contractors who violate nuclear safety regulations are exempt from civil penalties. DOE may automatically remit nuclear safety fines paid by any nonprofit educational institution (AEA Sec. 234A.).	<i>Sec. 14015.</i> The exemption for specific nonprofit DOE contractors is replaced by provisions limiting nuclear safety penalties on any nonprofit contractor to the amount of the management fee it has earned under a DOE contract. DOE authority to remit fines paid by nonprofit educational institutions is repealed.	<i>Sec. 507.</i> The exemption for specific nonprofit DOE contractors is replaced by provisions limiting nuclear safety penalties on any nonprofit contractor to the amount of the management fee it has earned under a DOE contract within any one-year period. DOE authority to remit fines paid by nonprofit educational institutions is repealed.	

## Miscellaneous Matters

Provision	Current Law	House	Senate	Comments
<b>Commercial reactor license period.</b>	For a commercial nuclear reactor that receives a combined construction and operating license from NRC, the initial 40-year license period could begin when NRC grants a combined license for a reactor, before construction has started and years before the start of operation (AEA Section 103 c.).	<i>Sec. 14021.</i> The 40-year license period for a combined license will not begin until NRC determines that the completed reactor is ready to start operating.	<i>Sec. 521.</i> A reactor's operating period under a combined license shall be no shorter than if separate construction and operating licenses had been issued.	
<b>Nuclear Regulatory Commission meeting transcripts.</b>	No provision.	<i>Sec. 14022.</i> If a quorum of NRC Commissioners meets to discuss official business, a transcript of non-confidential discussions at the meeting must be made available to the public.	No provision.	
<b>NRC training program.</b>	No specific provision.	<i>Sec. 14023.</i> Funding is authorized for NRC to carry out a training and fellowship program to develop critical nuclear safety skills.	No provision.	
<b>Cost recovery from Government agencies.</b>	Federal agencies must pay fees to NRC for certain licensed activities (AEA Sec. 161 w.).	<i>Sec. 14024.</i> NRC may impose licensing and other cost-based fees on all NRC-licensed activities conducted by other federal agencies.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Elimination of pension offset for critical NRC personnel.</b>	No provision.	<i>Sec. 14025.</i> If NRC has a critical need for the skills of a retired employee, NRC can hire the retiree as a contractor and exempt him or her from the annuity reductions that would otherwise apply.	No provision.	
<b>Carrying of firearms by licensee employees.</b>	NRC employees and contractors may carry firearms and make arrests to protect U.S. property (AEA Sec. 161 k.).	<i>Sec. 14026.</i> Authority to carry firearms and make arrests is extended to employees of nuclear power plants and other NRC-regulated facilities and their contractors.	No provision.	The House provision would counter some state laws that preclude private guard forces from utilizing some weapons.
<b>Unauthorized introduction of dangerous weapons.</b>	NRC may regulate the entry of weapons or dangerous materials into NRC facilities (AEA Sec. 229 a.).	<i>Sec. 14027.</i> NRC controls on weapons and dangerous materials are extended to nuclear plants and other NRC-regulated facilities.	No provision.	
<b>Sabotage of nuclear facilities or fuel.</b>	Any person who intentionally damages an NRC-licensed facility may be fined \$10,000 and imprisoned for 10 years (AEA Sec. 236 a.).	<i>Sec. 14028.</i> Maximum penalties for sabotage are increased to \$1 million and life imprisonment without parole.	No provision.	The House language clarifies that the penalties apply to facilities “certified” as well as “licensed” by NRC, and also to sabotage to facilities under construction.
<b>Cooperative research and development and special demonstration projects for the uranium mining industry.</b>	No specific provisions.	<i>Sec. 14029.</i> Funding is authorized for cost-shared research between DOE and domestic uranium producers on in-situ leaching mining technologies and related environmental restoration technologies.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Government uranium sales.</b>	DOE may sell its uranium stockpiles under certain conditions (42 U.S.C. 2297h-10).	<i>Sec. 14030.</i> With certain exceptions, DOE uranium sales are restricted to 3 million pounds per year from 2004-2009, rising to 10 million pounds per year after 2012. DOE may transfer 9,550 metric tons of uranium to USEC Inc.	<i>Sec. 511.</i> With certain exceptions, DOE uranium sales are restricted to 3 million pounds per year from 2003-2009, rising to 10 million pounds per year after 2012.	
<b>Exports of highly enriched uranium for medical isotope production.</b>	Highly enriched uranium (HEU) cannot be exported unless the foreign recipient agrees to switch to low enriched uranium (LEU) as soon as possible and suitable LEU fuel is actively under development (AEA Sec. 134).	<i>Sec. 14031.</i> HEU may be exported to Canada, Belgium France, Germany, and the Netherlands for production of medical isotopes. HEU exports also may be authorized to other countries that meet additional criteria. All HEU recipients must agree to switch to suitable LEU fuel if it becomes available.	No provision.	The current limit on HEU exports, known as the “Wyden Amendment,” is intended to ensure that foreign reactor operators cooperate with U.S. efforts to convert all HEU reactors to LEU. Supporters of the exemption contend that the existing restrictions could disrupt production of medical isotopes from foreign reactors fueled with HEU.
<b>Highly enriched uranium diversion threat report.</b>	No provision.	<i>Sec. 14032.</i> DOE shall submit a report to Congress on reducing the threat of stolen or diverted highly enriched uranium.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Whistleblower protection.</b>	Employees of nuclear power plants and other NRC licensee and employees of DOE contractors may file complaints with the Secretary of Labor if they are fired or punished for raising concerns about violations of the Atomic Energy Act (42 U.S.C. 5851).	<i>Sec. 14033.</i> DOE and NRC employees are given the same “whistleblower” protection as employees of contractors and licensees. An employee whose complaint does not receive a final decision by the Secretary of Labor within 180 days may take the case to federal court.	No provision.	
<b>Preventing the misuse of nuclear materials and technology.</b>	No provision.	<i>Sec. 14034.</i> No U.S. nuclear materials or technology may be exported to any country that, as of September 11, 2001, had been determined by the State Department to be a supporter of international terrorism.	No provision.	The House provision would block implementation of a 1994 agreement under which North Korea was to receive a U.S.-designed nuclear power plant in return for abandoning its nuclear weapons program.
<b>Limitation on DOE reimbursement of legal fees.</b>	No provision.	<i>Sec. 14035.</i> Except as required by existing contracts, DOE shall not reimburse its contractors for legal expenses incurred in defending against “whistleblower” complaints that are ultimately upheld.	No provision.	
<b>Transfer of West Valley nuclear site to DOE.</b>	No provision.	<i>Sec. 14036.</i> DOE shall transmit to Congress by the end of 2003 a plan for taking ownership of the West Valley nuclear site from the State of New York.	No provision.	DOE is cleaning up nuclear fuel reprocessing facilities at the site, with the State of New York paying 10% of the cost. But there has been a dispute between DOE and the state about future cleanup responsibilities.

<b>Provision</b>	<b>Current Law</b>	<b>House</b>	<b>Senate</b>	<b>Comments</b>
<b>Study of developing commercial nuclear power plants at DOE sites.</b>	No provision.	<i>Sec. 14037.</i> DOE shall study the feasibility of developing commercial nuclear power plants at existing DOE sites.	No provision.	
<b>Thorium cleanup reimbursement.</b>	DOE is authorized to reimburse up to \$365 million in government-related cleanup costs to the owner of a thorium processing site (42 U.S.C. 2296a).	No provision.	<i>Sec. 512.</i> The thorium reimbursement authorization is raised from the previous level of \$140 million to \$365 million.	Senate language is nearly identical to thorium reimbursement provisions in P.L. 107-222, signed August 21, 2002, which raised thorium reimbursement to \$365 million.
<b>Fast Flux Test Facility.</b>	No comparable provision.	No provision.	<i>Sec. 513.</i> DOE is prohibited from restarting the Fast Flux Test Facility (FFTF), a test reactor at Hanford, Washington, if the proposed missions can be conducted at other facilities that are already operating.	Sec. 2344(c) of the House bill prohibits nuclear energy operation and maintenance funds from being used for FFTF, although restart is not specifically mentioned. DOE began dismantling the facility April 7, 2003.
<b>Reactor Decommissioning Pilot Program.</b>		No provision.	<i>Sec. 516.</i> DOE shall decontaminate and decommission the sodium-cooled test reactor in northwest Arkansas.	

Provision	Current Law	House	Senate	Comments
<b>Commercial reactor antitrust reviews.</b>	NRC must provide copies of commercial reactor license applications to the Attorney General, who must review them for antitrust problems within 180 days. If problems are found, the Attorney General may become a party to the licensing proceedings (42 U.S.C. 2135).	No provision.	<i>Sec. 531.</i> After receiving notice from NRC, the Attorney General shall review commercial license applications for antitrust problems within 90 days. Other antitrust review procedures shall not apply to new commercial reactor license applications.	
<b>Protection of reactor decommissioning funds.</b>	No specific provision.	No provision.	<i>Sec. 532.</i> Funds set aside for decontamination and decommissioning of commercial nuclear reactors shall not be used to satisfy creditors for unrelated purposes. Similar protection is provided to insurance payments for nuclear incidents under the Price-Anderson Act.	
<b>Elimination of pension offset for critical NRC personnel.</b>	No provision.	No provision.	<i>Sec. 541.</i> If NRC has a critical need for the skills of a retired employee, NRC can hire the retiree as a contractor and exempt him or her from the annuity reductions that would otherwise apply.	
<b>NRC training program.</b>	No specific provision.	No provision.	<i>Sec. 542.</i> Funding is authorized for NRC to carry out a training and fellowship program to develop critical nuclear safety skills.	

## Vehicles and Fuels

### Energy Policy Act Amendments

Provision	Current Law	House	Senate	Comments
<b>Credit for substantial contribution toward noncovered fleets.</b>	Sec. 508 of the Energy Policy Act of 1992 (EPACT) (42 U.S.C. 13258) requires that state governments and producers and suppliers of alternative fuels (including electricity producers) include alternative fuel vehicles as a certain percentage of their new light-duty vehicle purchases. The requirement is 75% for states and 90% for fuel providers.	<i>Sec. 15011.</i> Vehicle purchase credits are granted to covered entities that make a “substantial contribution” to the purchase of alternative fuel vehicles in non-covered fleets. “Substantial” is defined as \$15,000 or more in cash or in-kind services. Double credits are given for the purchase of medium- or heavy-duty vehicles.	<i>Sec. 819(q).</i> Similar provision.	
<b>Credit for alternative fuel infrastructure.</b>	No provision.	<i>Sec. 15012.</i> Vehicle purchase credits are granted to covered entities that invest \$25,000 or more in fueling infrastructure for alternative fuel vehicles.	<i>Sec. 819(r).</i> Similar provision.	
<b>Credit for hybrid vehicles.</b>	No provision.	No similar provision.	<i>Sec. 819(p).</i> Fleet operators may generate credits through the purchase of hybrid electric vehicles.	Currently, hybrid vehicles are not considered alternative fuel vehicles because their primary fuel is gasoline.

Provision	Current Law	House	Senate	Comments
<b>Alternative fueled vehicle report.</b>	<p>The Energy Policy Act of 1992 (EPACT) requires that, of the vehicles purchased by federal and state agencies and alternative fuel providers in a given year, a percentage must be alternative fuel vehicles (42 U.S.C. 13220).</p> <p>Sec. 310 of EPACT requires each federal agency to report annually on its compliance with the federal alternative fuel vehicle requirements (42 U.S.C. 13218).</p>	<p><i>Sec. 15013.</i> The Secretary of Energy must report to Congress on the effectiveness of Titles III, IV, and V of EPACT (regarding alternative fuel vehicles and fleets). The report must analyze the availability and cost of alternative fuels, alternative fuel vehicles, and refueling infrastructure (also see <i>Sec. 15046</i>).</p>	<p><i>Sec. 806.</i> Dual-fueled vehicle fleets in executive branch agencies must use alternative fuels 100% of the time by Jan. 1, 2009, but the Secretary of Transportation is authorized to waive the requirement to 50% of the time by Jan. 1, 2009, and 75% by Jan. 1, 2011. No waivers may be extended beyond the end of 2012. Additional waiver authority is provided if the alternative fuel “is not reasonably available” in a particular geographic area.</p>	<p>Under current law, there is no specific requirement to use alternative fuels in these vehicles.</p>
<b>Allocation of incremental costs.</b>	<p>Sec. 303 of EPACT (42 U.S.C 13212) requires that 75% of covered light-duty vehicles purchased by federal agencies be alternative fuel vehicles. Sec. 303(c) allows agencies to allocate the incremental cost of those vehicles (the cost difference between the alternative fuel vehicle and a comparable gasoline or diesel vehicle) across the whole vehicle fleet.</p>	<p><i>Sec. 15014.</i> Agencies must allocate the incremental costs of alternative fuel vehicles across the entire fleet.</p>	<p>No provision.</p>	

Provision	Current Law	House	Senate	Comments
<b>Temporary biodiesel credit expansion.</b>	Sec. 311 of EPACT (42 U.S.C. 13220) allows fleet operators to meet up to 50% of the alternative fuel vehicle purchase requirement through the use of biodiesel fuel. However, fleet operators may not generate credits for future years through the use of biodiesel.	No similar provision.	<i>Sec. 817.</i> Fleet operators may claim alternative fuel vehicle credits for excess purchases of biodiesel fuel. Further, fleet operators may use biodiesel fuel to meet up to 100% of required purchases in a given year.	
<b>Neighborhood electric vehicles.</b>	EPACT (42 U.S.C. 13211) defines the term “alternative fuel vehicle.”	No similar provision.	<i>Sec. 818.</i> Neighborhood electric vehicles may be treated as alternative fuel vehicles for compliance and tax purposes.	Neighborhood electric vehicles (NEVs) are small electric vehicles that are certified for low speeds.
<b>Federal agency ethanol-blended gasoline and biodiesel purchasing requirement.</b>	Sec. 306 of EPACT (42 U.S.C. 13215) refers to an expired provision of the Act.	No similar provision.	<i>Sec. 820A.</i> A new section 306 of EPACT is created. Federal agencies must purchase ethanol-blended gasoline and biodiesel for diesel blending in areas where the fuels are generally available at a competitive price. Certain vehicles, such as non-road, combat, emergency, and law enforcement vehicles are exempt.	In some places, mainly in the Midwest, ethanol-blended gasoline comprises the majority of retail gasoline.

## Advanced Vehicles

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	Various related definitions are found in multiple statutes.	<i>Sec. 15021.</i> Several classes of vehicles are defined, including “alternative fuel vehicle,” “neighborhood electric vehicle,” and “ultra-low sulfur diesel vehicle.”	No similar provision.	
<b>Pilot program.</b>	The Department of Energy, through the Clean Cities Program, provides technical and educational assistance to cities wishing to expand the use of alternative fuel vehicles.	<i>Sec. 15022.</i> A grant program is established to provide grants for up to 10 separate projects. Grants may assist in the purchase of alternative fuel and advanced technology vehicles or the installation of alternative fuel refueling infrastructure. Eligible grantees are state governments, local governments, and metropolitan transit authorities. A maximum of \$20 million may be granted to any single project.	No similar provision.	

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Provision	Current Law	House	Senate	Comments
<b>Reports to Congress.</b>	No provision.	<i>Sec. 15023.</i> The Secretary of Energy must submit a report to Congress listing the grantees and other applicants, as well as detailing the grant selection process. Three years after enactment, the Secretary must submit to Congress annual evaluations of the effectiveness of the program.	No similar provision.	
<b>Authorization of appropriations.</b>	No provision.	<i>Sec. 15024.</i> \$200 million is authorized to carry out the program.	No similar provision.	

**Hydrogen Fuel Cell Heavy-Duty Vehicles**

Provision	Current Law	House	Senate	Comments
<b>Definition and Findings.</b>	No provision.	<i>Secs. 15031 and 15032.</i> Terms are defined and congressional findings are listed.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Hydrogen fuel cell buses.</b>	No provision.	See <i>Sec. 15033</i> and <i>Sec. 23002</i> .	<i>Sec. 807.</i> Appropriations of \$225 million to DOE are authorized for FY2003 to expand R&D for advanced technologies to improve the cleanliness of automobiles. Emphasis is placed on (1) fuel cells, including high temperature membranes for fuel cells and fuel cell auxiliary power systems; (2) hydrogen storage; (3) advanced vehicle engine and emission control systems; (4) advanced batteries and power electronics for hybrid vehicles; (5) advanced fuels; and (6) advanced materials.	
<b>Bus replacement.</b>	Sec. 5111 of the Transportation Equity Act for the 21 <sup>st</sup> Century (TEA-21, P.L. 105-178) established the Advanced Vehicle Technologies Program (AVP), which promotes advanced technology development through contracts, grants, and cooperative agreements.	<i>Sec. 15033.</i> The Secretary of Transportation, through AVP, is required to establish four projects to demonstrate hydrogen-fueled fuel cell buses (also see <i>Sec. 23002</i> ).	<i>Sec. 810.</i> The Secretary of Transportation is required to carry out a study to determine how best to replace diesel-fueled buses with buses that are hybrids, or buses that use fuel cells or cleaner burning alternative and renewable fuels.	While TEA-21 authorized a total of \$250 million over five years for AVP, only \$10 million total was appropriated in FY1999 and FY2000. Congress has not appropriated funds for AVP since FY2000.

Provision	Current Law	House	Senate	Comments
<b>Authorization of appropriations.</b>	Sec. 5111 of TEA-21 authorized \$50 million annually for AVP in FY1999 through FY2003. No funds are authorized in FY2004 or later.	<i>Sec. 15034.</i> A total of \$50 million is authorized for FY2004 through FY2008. Funds are authorized for the above project only.	No provision.	As was stated above, Congress has not appropriated funds for AVP since FY2000.

## Miscellaneous

Provision	Current Law	House	Senate	Comments
<b>Railroad efficiency.</b>	No provision.	<i>Sec. 15041.</i> A public-private research partnership is established for the development and demonstration of locomotive engines that increase fuel economy, reduce emissions, and lower costs. A total of \$90 million is authorized for FY2004 through FY2006.	<i>Sec. 1214.</i> Similar to the House provision, except that a total of \$130 million is authorized for FY2003 and FY2004.	
<b>Mobile emission reductions trading and crediting.</b>	No provision.	<i>Sec. 15042.</i> The Environmental Protection Agency (EPA) is required to study whether allowing mobile and stationary sources to trade emissions credits under the Clean Air Act would provide additional flexibility in attaining and maintaining air quality standards.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Idle reduction technologies.</b>	No provision.	<i>Sec. 15043.</i> DOE is required to study potential fuel savings from reducing long-duration idling of heavy-duty vehicles. EPA is required to study whether existing models of air emissions accurately reflect emissions from idling vehicles. Further, EPA is required to study whether emissions reduction credits should be granted for the installation of idle elimination systems.	<i>Sec. 822.</i> DOE is required to conduct a similar study. Once the study is completed, the Secretary of Energy has the authority to require the installation of idle-reduction systems on all new heavy-duty vehicles. Further, EPA is not required to assess its models under the Senate provision.	
<b>Study of aviation fuel conservation and emissions.</b>	No provision.	<i>Sec. 15044.</i> Within 60 days of enactment, the Administrator of the Federal Aviation Administration and the Administrator of EPA are required to commence a study to determine the impact of aircraft emissions on air quality in ozone nonattainment areas. The study, which is to culminate in a report to Congress within 180 days of commencement, is to focus on the impact of emissions by aircraft idling at airports, with recommendations concerning how such emissions may be reduced.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Diesel fueled vehicles.</b>	DOE conducts research on advanced vehicle emissions systems under its general research authority.	<i>Sec. 15045.</i> The Secretary of Energy is directed to accelerate efforts to improve diesel vehicle combustion and after-treatment technologies.	<i>Sec. 808.</i> DOE is required to accelerate R&D for diesel combustion and after treatment technologies with the objective of enabling diesel technology to meet Tier 2 emission standards not later than 2010. (These standards will apply to cars and light trucks after the 2003 model year.)	
<b>Waivers of alternative fueled vehicle fueling requirement.</b>	Sec. 400AA (a)(3)(E) of the Energy Policy and Conservation Act (EPCA) requires that dual fuel vehicles (vehicles capable of using either an alternative fuel or a conventional fuel) purchased by the federal government operate on alternative fuels where practicable.	<i>Sec. 15046.</i> EPCA is amended so that agencies must receive a waiver by the Secretary of Energy to be exempted from the fueling requirement (also see <i>Sec. 15013</i> ).	<i>Sec. 806.</i> Dual-fueled vehicle fleets in executive branch agencies must use alternative fuels 100% of the time by Jan. 1, 2009, but the Secretary of Transportation is authorized to waive the requirement to 50% of the time by Jan. 1, 2009, and 75% by Jan. 1, 2011. No waivers may be extended beyond the end of 2012. Additional waiver authority is provided if the alternative fuel “is not reasonably available” in a particular geographic area.	Under current law, there is no specific requirement to use alternative fuels in these vehicles.
<b>Total integrated thermal systems.</b>	No existing provision.	<i>Sec. 15047.</i> DOE is directed to study the potential for integrated thermal systems to reduce oil demand.	No provision.	

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Provision	Current Law	House	Senate	Comments
<b>Oil bypass filtration technology.</b>	No provision	<i>Sec. 15048.</i> The Secretary of Energy and the Administrator of EPA are required to study the potential oil savings from oil bypass filtration technology, and to assess the feasibility of using the technology in federal vehicle fleets.	No similar provision.	
<b>Natural gas condensate study.</b>	No provision.	<i>Sec. 15049.</i> The Secretary of Energy is required to study the possible applications and potential benefits of fuels derived from natural gas condensate.	No similar provision.	
<b>Study on reducing petroleum consumption, and procurement of alternative fueled and hybrid light-duty trucks for federal fleets.</b>	Sec. 303 of the Energy Policy Act of 1992 (P.L. 102-486) required that, by FY1999, 75% of vehicle purchases for a federal fleet of 20 or more light-duty motor vehicles be alternative-fueled vehicles. Exceptions were made for emergency, military and law enforcement vehicles, among other uses.	<i>Sec. 15050.</i> The General Services Administration (GSA) is directed to study the merits of setting performance measures to help reduce oil consumption by federal fleets.	<i>Sec. 805.</i> Five percent of light duty trucks procured for federal fleets in FY2005-FY2006 must be alternative-fueled or hybrid vehicles. This requirement increases to 10% after FY2006.	The targets specified in existing law have not been met.
<b>Conserve by Bicycling Program.</b>	No existing provision.	<i>Sec. 15051.</i> The Department of Transportation is directed to conduct a pilot bicycling program and report on it.	<i>Sec. 823.</i> Similar to the House provision, except that a total of \$5.5 million is authorized.	

Provision	Current Law	House	Senate	Comments
<b>Exception to HOV passenger requirements for alternative fuel vehicles.</b>	States may permit exemptions from high occupancy vehicle (HOV) restrictions for inherently low emission vehicles (ILEV) (23 U.S.C. 102(a)(2)).	No similar provision.	<i>Sec. 812.</i> States are permitted to exempt one-passenger alternative fuel vehicles from HOV restrictions.	Some alternative fuel vehicles do not meet the ILEV standards currently required for the exemption.

## Electricity

### Transmission Capacity

Provision	Current Law	House	Senate	Comments
<b>Transmission infrastructure improvement rulemaking.</b>	FERC must approve transmission rates charged by utilities. These rates must be just and reasonable (16 U.S.C. 824d).	<i>Sec. 16011.</i> FERC is required to establish a rule to create incentive-based transmission rates. Under the rule, FERC must approve a transmission organization's request that new transmission facilities that increase the transfer capability of the system be participant-funded.	No provision.	

Provision	Current Law	House	Senate	Comments
<p><b>Siting of interstate electrical transmission facilities (continued in next row).</b></p>	<p>Transmission siting is the responsibility of the states.</p> <p>Federal Land Policy and Management Act (43 U.S.C. 1763).</p>	<p><i>Sec. 16012.</i> The Secretary of Energy will conduct a study of electric transmission congestion every three years. Based on the findings, the Secretary of Energy may designate a geographic area as being congested. Under certain conditions, FERC is authorized to issue construction permits. Permit holders will be allowed to petition in District Court to acquire rights-of-way through the exercise of the right of eminent domain. Any exercise of eminent domain authority is considered to be takings of private property for which just compensation is due. This section does not apply to the Electric Reliability Council of Texas (ERCOT). An applicant for federal authorization to site transmission facilities on federal lands may request that the Department of Energy be the lead agency to coordinate environmental review and other federal authorization. (continued in next row)</p>	<p>No provision.</p>	<p>Under proposed FPA section 216(d) there is no specific comment period required. New FPA section 216(e) appears to be exercising federal power of eminent domain to cross private land. New FPA section 216(g) does not clearly state whether companies using condemnation authority to cross private land must comply with NEPA. New section 216(h) does not state whether property owners will be required to reimburse compensation if land is transferred back to the owner. New FPA section 216(j)(1) gives DOE new authority to prepare environmental documents and appears to give DOE additional decision-making authority for rights-of-way and siting on federal lands. This would appear to give DOE input into the decision process for creating rights-of-way. New FPA section 216(l) would not apply to monuments that are not managed by the National Park Service.</p>

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Provision	Current Law	House	Senate	Comments
<p><b>Siting of interstate electrical transmission facilities (continued from row above).</b></p>	<p>(See row above.)</p>	<p><i>Sec. 16012</i> (continued from row above). Once a completed application is submitted, all related environmental reviews must be completed within 1 year unless existing federal law environmental review document is to be used for all decisions on the proposed project. Review under section 503 of the Federal Land Policy and Management Act may be streamlined by relying on prior analyses. Any denial of federal rights-of-way may be appealed by the applicant or relevant state to the Secretary of Energy. The Secretary of Energy must issue a decision within 90 days of the appeal's filing. States may enter into interstate compacts for the purposes of siting transmission facilities and the Secretary of Energy may provide technical assistance.</p>		<p>(See row above.)</p>

Provision	Current Law	House	Senate	Comments
<b>Study of siting an electric transmission system on Amtrak right-of-way.</b>	None.	No provision.	<i>Sec. 1703.</i> The Secretary of Energy must contract with Amtrak to study the feasibility of building and operating a new electric transmission system on the Amtrak right-of-way in the Northeast Corridor.	
<b>Transmission enhancements.</b>	The Federal Power Act (16 U.S.C. 791a and following) gives FERC authority to order interconnections with the transmission system and transmission capacity additions necessary to support the interconnection (Section 210). Section 212 allows the costs of transmission system enlargement to be included in the rates for wholesale transmission services.	<i>Sec. 16013.</i> FERC is to exercise its authority under the Federal Power Act to encourage technologies that will increase the efficiency and transfer capability of transmission networks.	<i>Sec. 210.</i> The Federal Government is to be attentive to transmission issues, including investment, efficiency, and enhancements, that could be addressed through government policy.	Investment in the transmission system has not kept pace with increases in generation. The House provision is intended to increase the capacity of existing lines through the implementation of technology. The Senate provision is intended to use government policy to facilitate improvements in the transmission system.

## Bonneville Power Administration

Provision	Current Law	House	Senate	Comments
<b>Bonneville Power Administration Bonds.</b>	Current BPA borrowing authority is \$4.45 billion (16 U.S.C 838k, P.L. 108-7).	No similar provision	<i>Sec. 272.</i> Bonneville Power Administration's borrowing authority is increased by \$1.3 billion to provide transmission system improvements.	In FY2003, BPA's borrowing authority increased by \$700 million. BPA is not requesting increased borrowing authority in FY2004

## Transmission Operation

Provision	Current Law	House	Senate	Comments
<p><b>Open access transmission by certain utilities.</b></p>	<p>The Federal Power Act (Section 201(f)) does not apply to federal power marketing administrations, state entities, or rural electric cooperatives (16 U.S.C. 824).</p>	<p><i>Sec. 16021.</i> FERC is authorized, by rule or order, to require unregulated transmitting utilities (power marketing administrations, state entities, and rural electric cooperatives) to charge rates comparable to what they charge themselves, and also require that the terms and conditions of the sales are comparable to those required of other utilities. Exemptions are established for utilities selling less than 4 million megawatt-hours of electricity per year, for distribution utilities, and for utilities that own or operate transmission facilities that are not necessary to facilitate a nationwide interconnected transmission system. FERC may remand transmission rates to an unregulated transmitting utility if the rates do not comply with this section.</p>	<p><i>Sec. 205.</i> Similar provision.</p>	<p>Often referred to as “FERC-lite.”</p>

Provision	Current Law	House	Senate	Comments
<b>Regional transmission organizations.</b>	No current law.	<i>Sec. 16022.</i> It is the sense of the Congress that utilities should voluntarily become members of regional transmission organizations. It is the sense of the Congress that FERC should provide incentive rates for transmission for those utilities that join regional transmission organizations. FERC is required to report to Congress within 120 days of enactment the status of all regional transmission organization applications. Federal utilities (power marketing administrations or Tennessee Valley Authority) are authorized to participate in regional transmission organizations.	No provision.	
<b>Policy on regional coordination.</b>	No current law.	No provision.	<i>Sec.101.</i> The policy of the federal government is to encourage states to coordinate, on a regional basis, policies to maximize the reliability of energy services, including electric transmission and generation, gas transportation, storage, and distribution, and fuel conservation.	

CRS-63

Provision	Current Law	House	Senate	Comments
<b>Federal support for regional coordination.</b>	No current law.	No provision.	<i>Sec. 102.</i> The Department of Energy is directed to provide technical assistance to states and regional organizations to assist with activities defined in Sec. 101.	
<b>Native load.</b>	Section 201 of the Federal Power Act gives FERC jurisdiction over “the transmission of electric energy in interstate commerce and the sale of such energy at wholesale in interstate commerce.” Section 205 of the Federal Power Act prohibits utilities from granting “undue preference or advantage to any person or subject any person to any undue prejudice or disadvantage” (16 U.S.C. 824).	<i>Sec. 16023.</i> A load-serving entity is entitled to use its transmission facilities or transmission rights to serve its existing customers before it is obligated to make its transmission capacity available for other uses.	No provision.	This section is intended to clarify that reserving transmission for existing customers is not considered unduly discriminatory.

## Reliability

Provision	Current Law	House	Senate	Comments
<p><b>Electric reliability standards.</b></p>	<p>No current law.</p>	<p><i>Sec. 16031.</i> FERC is required to issue a rule to implement requirements of this section not later than 180 days after enactment. FERC is required to certify an electric reliability organization (ERO). The FERC-approved electric reliability organization will develop and enforce reliability standards for the bulk-power system. Standards are enforceable by the electric reliability organization. The provision does not apply to Alaska or Hawaii.</p>	<p><i>Sec. 206.</i> Similar provision</p>	<p>This would give an electric reliability organization (currently the North American Electric Reliability Council (NERC)) the primary authority to develop reliability standards.</p>
<p><b>Access to transmission by intermittent generators.</b></p>	<p>No specific law.</p>	<p>No provision.</p>	<p><i>Sec. 208.</i> FERC must require transmitting utilities to provide service to solar and wind generators at rates that do not unduly prejudice or disadvantage the generators for scheduling deviations. FERC may exempt a transmitting utility from the requirements of this provision if the solar and wind generators are likely to have an adverse impact on reliability.</p>	

Provision	Current Law	House	Senate	Comments
<b>Enforcement.</b>	Electric utilities are subject to the criminal penalty section of the Federal Power Act (16 U.S.C. 825o(c)).	No provision.	<i>Sec. 209.</i> The exemptions from the criminal penalty section of the Federal Power Act (16 U.S.C. 825o(c)) for certain activities including wheeling and sales by Exempt Wholesale Generators are repealed. The civil penalty section of the Federal Power Act (16 U.S.C. 825o-l) is extended to include sections of this Act.	

### Public Utility Holding Company Act Amendments

Provision	Current Law	House	Senate	Comments
<b>Short title.</b>	The Public Utility Holding Company Act of 1935 (PUHCA, 15 U.S.C. 79 et seq.).	<i>Sec. 1604I.</i> This subtitle may be cited as the “Public Utility Holding Company Act of 2003.”	<i>Sec. 221.</i> This subtitle may be cited as the “Public Utility Holding Company Act of 2003.”	

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	Various terms are defined at 15 U.S.C. 79b.	<i>Sec. 16042.</i> The following terms are defined: affiliates; associate company; Commission; company; electric utility company; exempt wholesale generator; gas utility company; holding company; holding company system; jurisdictional rates; natural gas company; person; public utility; public utility company; State commission; subsidiary company; and voting security.	<p><i>Sec. 201.</i> The Federal Power Act is amended to add federal power marketing agencies to the definition of an electric utility. A definition of a transmitting utility is added to the Federal Power Act. A transmitting utility includes state and municipally owned or operated transmission facilities involved in interstate commerce or transmission of electricity at wholesale.</p> <p><i>Sec. 222.</i> The following terms are defined: affiliate; associate company; Commission; company; electric utility company; gas utility company; holding company; holding company system; jurisdictional rates; natural gas company; person; public utility; public utility company; state commission; subsidiary company, and voting security.</p>	

Provision	Current Law	House	Senate	Comments
<p><b>Repeal of the Public Utility Holding Company Act of 1935.</b></p>	<p>In general, the Public Utility Holding Company Act of 1935 regulates the structure of holding companies by prohibiting all holding companies that are more than twice removed from their operating subsidiaries, federally regulates holding companies of investor-owned utilities, and provides for Securities and Exchange Commission (SEC) regulation of mergers and diversification proposals. Registered holding companies of subsidiaries are required to have SEC approval prior to issuing securities; all loans and intercompany financial transactions are regulated by the SEC. A holding company can be exempt from PUHCA if its business operations and those of its subsidiaries occur within one state or within contiguous states (15 U.S.C. 79 et seq.).</p>	<p><i>Sec. 16043.</i> The Public Utility Holding Company Act of 1935 is repealed.</p>	<p><i>Sec. 223.</i> The Public Utility Holding Company Act of 1935 is repealed.</p>	

CRS-68

Provision	Current Law	House	Senate	Comments
<b>Federal access to books and records.</b>	Registered holding companies and subsidiary companies are required to preserve accounts, cost-accounting procedures, correspondence, memoranda, papers, and books that FERC deems necessary or appropriate in the public interest or for protection of investors and consumers (15 U.S.C. 79o).	<i>Sec. 16044.</i> Federal access is provided to books and records of holding companies and their affiliates. Affiliate companies must make available to the Commission the books and records of affiliate transactions. Federal officials must maintain the confidentiality of such books and records.	<i>Sec. 224.</i> Similar provision.	
<b>State access to books and records.</b>	Under the Federal Power Act, state commissions may examine the books, accounts, memoranda, contracts, and records of a jurisdictional electric utility company, an exempt wholesale generator that sells to such electric utility, and any electric utility company or holding company that is an associate company or affiliate of an exempt wholesale generator (16 U.S.C. 824).	<i>Sec. 16045.</i> A jurisdictional state commission may make a reasonably detailed written request to a holding company or any associate company for access to specific books and records, which must be kept confidential. This section does not apply to a holding company that is such solely by reason of ownership of one or more qualifying facilities. Response to such requests is mandatory. Compliance with this section is enforceable in U.S. District Court.	<i>Sec. 225.</i> Similar provision.	

## CRS-69

Provision	Current Law	House	Senate	Comments
<b>Exemption authority.</b>	No current law.	<i>Sec. 16046.</i> FERC is directed to promulgate rules to exempt qualifying facilities, exempt wholesale generators, and foreign utility companies from the requirements of Section 16044.	<i>Sec. 226.</i> FERC is directed to promulgate rules to exempt qualifying facilities, exempt wholesale generators, and foreign utility companies from the requirements of Section 224.	
<b>Affiliate transactions.</b>	The Federal Power Act requires that jurisdictional rates are just and reasonable and prohibits cross-subsidization (16 U.S.C. 791a et seq.).	<i>Sec. 16047.</i> FERC retains the authority to prevent cross-subsidization and to assure that jurisdictional rates are just and reasonable. FERC and state commissions retain jurisdiction to determine whether associate company activities may be recovered in rates.	<i>Sec. 227.</i> Similar provision.	
<b>Applicability.</b>	No specific provision.	<i>Sec. 16048.</i> Except as specifically noted, this subtitle does not apply to the U.S. Government, a state or any political subdivision of a state, or a foreign governmental authority operating outside the United States.	<i>Sec. 228.</i> Similar provision.	
<b>Effect on other regulations.</b>	No specific provision.	<i>Sec. 16049.</i> FERC or a state commission is not precluded from exercising its jurisdiction under otherwise applicable laws to protect utility customers.	<i>Sec. 229.</i> Similar provision.	

CRS-70

Provision	Current Law	House	Senate	Comments
<b>Enforcement.</b>	15 U.S.C. 79r. The Securities and Exchange Commission has authority to investigate and enforce provisions of the Public Utility Holding Company Act of 1935.	<i>Sec. 16050.</i> FERC has authority to enforce this provision under sections 306-317 of the Federal Power Act.	<i>Sec. 230.</i> Similar provision.	
<b>Savings provisions.</b>	Not applicable.	<i>Sec. 16051.</i> Persons may continue to engage in legal activities in which they have been engaged or are authorized to engage in on the effective date of the Act. The subtitle does not limit the authority of the Federal Energy Regulatory Commission under the Federal Power Act or the Natural Gas Act.	<i>Sec. 231.</i> Similar provision.	
<b>Implementation.</b>	Not applicable.	<i>Sec. 16052.</i> Not later than 12 months after enactment, FERC will promulgate regulations necessary to implement this subtitle and submit to Congress recommendations for technical or conforming amendments to federal law that might be necessary to carry out this subtitle.	<i>Sec. 232.</i> Not later than 18 months after enactment, FERC will promulgate regulations necessary to implement this subtitle and submit to Congress recommendations for technical or conforming amendments to federal law that might be necessary to carry out this subtitle.	

## CRS-71

<b>Provision</b>	<b>Current Law</b>	<b>House</b>	<b>Senate</b>	<b>Comments</b>
<b>Transfer of resources.</b>	The Securities and Exchange Commission maintains books and records and regulates security transactions (15 U.S.C. 79 et seq.).	<i>Sec. 16053.</i> The Securities and Exchange Commission will transfer all applicable books and records to FERC.	<i>Sec. 233.</i> Similar provision.	No time frame for transfer books and records is provided.
<b>Effective date.</b>	Not applicable.	<i>Sec. 16054.</i> Twelve months after enactment, this subtitle will take effect.	<i>Sec. 236.</i> Eighteen months after enactment, this subtitle will take effect.	
<b>Authorization of appropriations.</b>	Not applicable.	<i>Sec. 16055.</i> Necessary funds to carry out this subtitle are authorized to be appropriated.	<i>Sec. 237.</i> Similar provision.	
<b>Conforming amendments to the Federal Power Act.</b>	The current jurisdiction of the Securities and Exchange Commission under the Public Utility Holding Company Act of 1935 is referenced by 16 U.S.C. 825q; 16 U.S.C. 824(g)(5); 16 U.S.C. 824m.	<i>Sec. 16056.</i> The Federal Power Act is amended to reflect the changes to the Public Utility Holding Company Act of 1935.	<i>Sec. 238.</i> Similar provision.	
<b>Interagency review of competition in the wholesale and retail markets for electric energy.</b>	No current law.	No similar provision.	<i>Sec. 234.</i> An interagency task force is created to perform a study and analysis of electric competition within U.S. wholesale and retail markets. The task force will submit a report not later than 1 year after the effective date of this Act.	

CRS-72

Provision	Current Law	House	Senate	Comments
<p><b>GAO study on implementation.</b></p>	<p>No current law.</p>	<p>No similar provision.</p>	<p><i>Sec. 235.</i> The General Accounting Office is directed to study the effectiveness of the federal government and the states in: 1) preventing anti-competitive practices; and 2) promoting competition and efficient energy markets that benefit consumers. This report must be submitted to Congress no later than 24 months after the effective date of this Act.</p>	

## Public Utility Regulatory Policies Act (PURPA) Amendments

Provision	Current Law	House	Senate	Comments
<b>Real-time pricing and time-of-use metering standards.</b>	States are required to consider whether to implement standards for the purchase of long-term wholesale power supplies (16 U.S.C. 2621(d)).	<i>Sec. 16061.</i> Not later than one year after enactment, each state regulatory authority is required to consider implementing the following standards: (1) if requested by an electric consumer, each electric utility must provide customers with a real-time rate schedule; and (2) if requested by an electric consumer, each electric utility is required to provide time-of-use metering technology.	<i>Sec. 241.</i> States must consider a standard for real-time pricing of electricity for retail customers. Real-time pricing on the retail level would reflect fluctuations of wholesale rates. Also contains provision on time-of-use metering. In states allowing retail competition, distribution company must provide the same time-of-use metering and communication service to all of its retail customers.	
<b>Adoption of additional standards.</b>	No current law.	No similar provision.	<i>Sec. 242.</i> States are required to consider implementation of technical and pricing standards for distributed generation interconnection to the local distribution system, a standard for each electric utility to develop a plan to develop a diverse fuel mix and technology mix for generating electricity, and a standard to increase the efficiency of fossil fuel generators.	

CRS-74

Provision	Current Law	House	Senate	Comments
<b>Technical assistance.</b>	No current law.	No similar provision.	<i>Sec. 243.</i> The Secretary of Energy is authorized to provide technical assistance to the states to help develop the standards under Section 242.	
<b>Cogeneration and small power production purchase and sale requirements.</b>	Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) requires utilities to purchase power from qualifying facilities and small power producers at a rate of the utilities' avoided cost (16 U.S.C. 824a-3).	<i>Sec. 16062.</i> Mandatory power purchase requirements under §210 of PURPA will not apply to new contracts after the date of enactment if FERC finds that a competitive electric market exists and a qualifying facility has access to independently administered, auction-based day-ahead and real-time wholesale markets and long-term wholesale markets. FERC may enforce recovery of "stranded costs" incurred by utilities because of PURPA-mandated cogeneration and small power purchases. Ownership limitations under PURPA are repealed.	<i>Sec. 244.</i> Mandatory purchase requirements under PURPA §210 will not apply to new contracts after the date of enactment if FERC finds that a competitive electric market exists. FERC may enforce recovery of "stranded costs" incurred by utilities because of PURPA-mandated cogeneration and small power purchases. Ownership limitations under PURPA are repealed.	
<b>Smart metering.</b>	No current law.	<i>Sec. 16063.</i> States must consider whether to implement time-based rate schedules and time-based metering.	No provision.	

## Renewable Energy

Provision	Current Law	House	Senate	Comments
<b>Net metering.</b>	No current law.	<i>Sec. 16071.</i> Each state public utility commission is authorized to decide if net metering, will be implemented. All utilities are required to provide net metering. Size limits are 500 kilowatts (kw) for commercial systems and 10 kw for residential systems.	<i>Sec. 245.</i> Similar provision.	
<b>Renewable energy production incentive.</b>	EPACT Sec. 1212 provides a 1.5 cent/kwh incentive for power produced from wind and biomass by state and local governments and non-profit electrical cooperatives. Funded by appropriations, it was created to parallel the renewable energy production tax credit for businesses (Title XIX).	<i>Sec. 16072.</i> Eligibility is extended through 2023 and expanded to include electric cooperatives and tribal governments. Qualifying resources are expanded to include landfill gas.	<i>Sec. 261.</i> Eligibility is extended to certain public utilities. Qualifying resources are expanded to include landfill gas, incremental hydro, and ocean energy. Funding for hydro may not exceed 30% of the total (also similar to <i>Sec. 13201</i> ).	

Provision	Current Law	House	Senate	Comments
<b>Renewable energy on Federal lands.</b>	No existing requirement.	<i>Sec. 16073.</i> The Secretary of the Interior, assisted by the Secretary of Agriculture, is required to study the potential for solar and wind energy resources on federal lands. Also, the National Academy of Sciences (NAS) is directed to study the potential for solar, wind, and ocean energy on the Outer Continental Shelf.	<i>Sec. 265.</i> The Secretary of the Interior is directed to create a pilot program to develop wind and solar energy on federal lands.	
<b>Energy infrastructure protection and reliability research and development.</b>	General DOE authority.	No provision.	<i>Sec. 1261.</i> DOE shall conduct a program for research, development, and deployment of technologies to protect energy infrastructure.	The Department of Energy (DOE) currently has a Transmission Reliability Program under the Office of Power Technologies. The Transmission Reliability Program conducts research to improve the reliability of the U.S. electric power system. Security implementation is the responsibility of the Department of Homeland Security.
<b>Assessment of renewable energy resources.</b>	No existing requirement.	<i>Sec. 16074.</i> DOE is required to report annually on resource potential, including solar, wind, biomass, ocean, geothermal, and hydro.	<i>Sec. 262.</i> DOE is required to report annually on resource potential, including solar, wind, biomass, ocean, geothermal, and hydro.	

Provision	Current Law	House	Senate	Comments
<b>Renewable portfolio standard (RPS).</b>	No existing requirement.	No similar provision	<i>Sec. 264.</i> A renewable energy production target is set for retail suppliers, starting at 1% in 2005 and rising to 10% by 2019. Tradable credits are created to help compliance. Eligible renewable resources include solar, wind, geothermal, biomass (including municipal solid waste), landfill gas, a generation offset (on-site renewables generation that reduces demand), and incremental hydropower. The baseline estimate excludes eligible renewables, municipal solid waste, and hydropower. Special credits apply to incremental hydropower, generation offsets, production on Native American lands, and co-firing with conventional resources. A non-compliance penalty is provided.	Several states have enacted an RPS. The Senate bill allows states to have a stronger requirement than the federal standard. (Sec. 271 of the Senate bill redefines a 3 cents/kwh credit in Sec. 264 to be 1.5 cents/kwh.)
<b>Change RPS price cap from 3 cents to 1.5 cents.</b>		No similar provision.	<i>Sec. 271.</i> The 3 cent/kwh price cap for tradable credits in Sec. 264, which establishes an RPS, shall be considered 1.5 cents/kwh.	

## Market Transparency, Round Trip Trading Prohibition, and Enforcement

Provision	Current Law	House	Senate	Comments
<b>Market transparency rules.</b>	No current law.	<i>Sec. 16081.</i> Within 180 days after enactment, FERC is required to issue rules to establish an electronic system that provides information about the availability and price of wholesale electric energy and transmission services. Commercial or financial information that if disclosed FERC determines is detrimental to the operation of an effective market or jeopardizes system security is exempt from disclosure.	<i>Sec. 207.</i> Within 180 days after enactment, FERC is required to issue rules to establish an electronic system that provides information about the availability and price of wholesale electric energy and transmission services. Commercial or financial information that FERC determines to be privileged, confidential, or otherwise sensitive is exempt from disclosure.	
<b>Information disclosure</b>	No provision.	No provision.	<i>Sec. 251.</i> The Federal Trade Commission must issue rules requiring electric utilities to provide electric consumers information on the cost and type of service being offered.	

CRS-79

Provision	Current Law	House	Senate	Comments
<p><b>Prohibition on round trip trading.</b></p>	<p>18 U.S.C. 1341 (mail fraud): This in part applies to use of the mail for the purpose of executing, or attempting to execute, a scheme or artifice to defraud or for obtaining money or property by false or fraudulent pretenses, representations, or promises.</p> <p>18 U.S.C. 1343 (wire fraud): Covers use of wire, radio, or television communication in interstate or foreign commerce to transmit or to cause to be transmitted any writings, signs, signals, pictures, or sounds, for the purpose of executing a scheme or artifice to defraud or for obtaining money or property by means of false or fraudulent pretenses, representations, or promises.</p>	<p><i>Sec. 16082.</i> It is unlawful for any individual, corporation, or any government entity (municipality, state, power marketing administration) to engage in round-trip electricity trading. Round-trip trading is defined to include contracts where purchase and sale transactions have no specific financial gain or loss and are entered into with the intent to distort reported revenues, trading volumes, or prices.</p>	<p>No provision.</p>	<p>This section explicitly applies existing fraud statutes to round-trip electricity trading.</p>
<p><b>Conforming changes.</b></p>	<p>16 U.S.C. 824.</p>	<p><i>Sec. 16083.</i> Changes reflect amendments to the Federal Power Act.</p>	<p>No provision.</p>	

CRS-80

Provision	Current Law	House	Senate	Comments
<b>Enforcement.</b>	Criminal penalties may not exceed \$5,000 and/or 2 years imprisonment. A civil penalty not exceeding \$10,000 per day of violation may be assessed for violations of Sections 211, 212, 213, or 214 of the Federal Power Act (16 U.S.C. 825e and 16 U.S.C. 825o).	<i>Sec. 16084.</i> The Federal Power Act is amended to allow electric utilities to file a complaint with FERC and to allow complaints to be filed against transmitting utilities. Criminal and civil penalties under the Federal Power Act are increased.	<i>Sec. 209.</i> The exemptions from the criminal penalty section of the Federal Power Act (16 U.S.C. 825o(c)) for certain activities including wheeling and sales by Exempt Wholesale Generators are repealed. The civil penalty section of the Federal Power Act (16 U.S.C. 825o-l) is extended to include sections of this Act.	

**Consumer Protections**

Provision	Current Law	House	Senate	Comments
<b>Refund effective date.</b>	Refunds for rates that FERC finds to be unjust, unreasonable, unduly discriminatory, or preferential begin a minimum of 60 days after a complaint is filed (16 U.S.C. 824e(b)).	<i>Sec. 16091.</i> Section 206(b) of the Federal Power Act is amended to allow the effective date for refunds to begin at the time of the filing of a complaint with FERC but not later than 5 months after filing of a complaint. If FERC does not make its decision within the time-frame provided, FERC must state its reasons for not acting and provide a time-frame for the decision.	<i>Sec. 204.</i> Section 206(b) of the Federal Power Act is amended to allow the effective date for refunds to begin at the time of the filing of a complaint with FERC but not later than 5 months after filing of a complaint.	The House bill (Sec. 16091(4)) needs a comma inserted after “in the fifth sentence” to keep the intended meaning.

Provision	Current Law	House	Senate	Comments
<b>Market-based rates.</b>	Section 205 of the Federal Power Act requires just and reasonable rates to be charged for transmission or sale of electric energy (16 U.S.C. 824d).	No provision.	<i>Sec. 203.</i> FERC may approve market-based rates when the seller and its markets meet certain criteria. When the Commission determines the market-based rate is unjust, unreasonable, unduly discriminatory or preferential, FERC must determine a just and reasonable rate.	This provision could limit FERC's options to respond to rates found to be unjust, unreasonable, unduly discriminatory or preferential.
<b>Jurisdiction over interstate sales.</b>	Section 201(f) of the Federal Power Act exempts government entities from FERC rate regulation (16 U.S.C. 824).	<i>Sec. 16092.</i> Any entity that is not a public utility (including an entity referred to under §201(f) of the Federal Power Act) and that enters into spot market transactions will be subject to FERC refund authority. This section does not apply to electric cooperatives or government entities (power marketing administrations, state-owned utilities, municipalities) that sell no more than 4 million megawatt-hours of electricity per year. Upon finding that action is necessary to protect the public interest, FERC may modify or abrogate any contract entered into after enactment of this section unless the contract expressly provides for a different standard of review.	No provision.	As engrossed in the House, this section is intended to exempt any coop or an entity described in §201(f) of the Federal Power Act that does not sell more than 4 million megawatt-hours of electricity in one year. However, as drafted, this section could be interpreted as exempting all §201(f) entities from FERC refund authority.

CRS-82

Provision	Current Law	House	Senate	Comments
<b>Consumer privacy.</b>	No current law.	<i>Sec. 16093.</i> The Federal Trade Commission is required to issue rules to protect the privacy of electric consumers for the disclosure of consumer information obtained in connection with the sale or delivery of electric energy to consumers. If the Federal Trade Commission finds that a state's regulations provide equivalent or greater protection than the rules issued under this section, then state regulations will apply rather than federal rules.	<i>Sec. 252.</i> The Federal Trade Commission is directed to issue rules prohibiting an electric utility from sharing its customers' individual information without prior written approval by a consumer.	
<b>Unfair trade practices.</b>	No current law.	<i>Sec. 16094.</i> The Federal Trade Commission is required to issue rules to prohibit slamming and cramming. If the Federal Trade Commission determines that a state's regulations provide equal or greater protection than the federal rule, then a state's regulations on slamming and cramming will apply.	<i>Sec. 254.</i> The Federal Trade Commission is required to issue rules prohibiting slamming and cramming.	Slamming occurs when an electric utility switches a customer's electric provider without the consumer's knowledge. Cramming occurs when an electric utility adds additional services and charges to a customer's account without the permission of the customer.

Provision	Current Law	House	Senate	Comments
<b>Office of Consumer Advocacy.</b>	No current law.	No provision.	<i>Sec. 253.</i> An Office of Consumer Advocacy is established within the Department of Justice. The Office may represent the interest of energy customers on matters concerning rates or service at FERC hearings, at U.S. court proceedings, and hearings and proceedings of other federal regulatory agencies and commissions.	
<b>Applicable procedures.</b>	Administrative Procedure Act (5 U.S.C. 533).	No provision.	<i>Sec. 255.</i> The Federal Trade Commission will adhere to the notice and comment rulemaking procedures under the Administrative Procedure Act (5 U.S.C. 533) for rules issued under this subtitle.	
<b>Federal Trade Commission enforcement.</b>	Federal Trade Commission Act (15 U.S.C. 57a).	No provision.	<i>Sec. 256.</i> Violations of rules under this subtitle will be treated as violations of the Federal Trade Commission Act (15 U.S.C. 57a).	
<b>State authority.</b>	No applicable law.	No provision.	<i>Sec. 257.</i> States are given authority to prescribe and enforce laws, rules, or procedures regarding the practices of this subtitle.	This gives states the right to codify and enforce laws, rules, and procedures that may be in direct conflict with the Consumer Protection subtitle.

## CRS-84

Provision	Current Law	House	Senate	Comments
<b>Application of subtitle.</b>	No applicable law.	No provision.	<i>Sec. 258.</i> This subtitle applies only to electric utilities whose retail sales exceed 500 million kilowatt-hours per calendar year.	
<b>Definitions.</b>	16 U.S.C. 2602	No provision.	<i>Sec. 259.</i> Defines aggregate consumer information and consumer information. Electric consumer, electric utility, and state regulatory authority have the same meaning as such terms under PURPA.	

## Merger Review Reform and Accountability

Provision	Current Law	House	Senate	Comments
<p><b>Merger review reform and accountability.</b></p>	<p>Under Section 203(a) of the Federal Power Act, FERC review of asset transfers applies to transactions valued at \$50,000 or more (16 U.S.C. 824b).</p>	<p><i>Sec. 16101.</i> Within 180 days of enactment, the Secretary of Energy shall transmit to Congress a study on whether FERC's merger review authority is duplicative with other agencies' authority and recommendations that would eliminate any unnecessary duplication. FERC is required to issue an annual report to Congress describing all conditions placed on mergers under Section 203(b) of the Federal Power Act. FERC is also required to include in its report whether such a condition could have been imposed under any other provision of the Federal Power Act.</p>	<p><i>Sec. 202.</i> The Federal Power Act is amended to give FERC review authority for transfer of assets valued in excess of \$10 million. FERC must give state public utility commissions and governors reasonable notice in writing. FERC must establish rules to comply with this section.</p>	

**Study of Economic Dispatch**

Provision	Current Law	House	Senate	Comments
<b>Study on the benefits of economic dispatch.</b>	No current law.	<i>Sec. 16111.</i> The Secretary of Energy, in consultation with the states, will issue an annual report to Congress and the states on the current status of economic dispatch. Economic dispatch is defined as “the operation of generation facilities to produce energy at the lowest cost to reliably serve consumers, recognizing any operational limits of generation transmission facilities.”	No provision.	

## Motor Fuels

### General Provisions

Provision	Current Law	House	Senate	Comments
<b>Renewable content of motor vehicle fuel.</b>	No provision.	<i>Sec. 17101.</i> A new §211(o) is added to the Clean Air Act. Beginning in 2005, motor gasoline must contain a certain amount of renewable fuel. In 2005, 2.7 billion gallons of renewable fuel must be sold annually, increasing to 5.0 billion gallons in 2015. After 2015, the percentage of renewable fuel required in the motor fuel pool must be the same as the percentage required in 2015. This standard will largely be met by ethanol, but other renewable fuels, such as biodiesel, are eligible. Ethanol from cellulosic biomass (including from wood and agricultural residue, animal waste, and municipal solid waste) is granted extra credits toward fulfilling the program's requirements. Further, the bill would establish a credit trading program to provide flexibility to refiners and blenders.	<i>Sec. 820 (a).</i> Similar to the House version except that 2.3 billion gallons of renewable fuel would be required in 2004, increasing to 5.0 billion gallons in 2012. The same percentage standard would apply after 2012.	

## CRS-88

Provision	Current Law	House	Senate	Comments
<b>Fuels safe harbor.</b>	No provision.	<i>Sec. 17102.</i> A “safe harbor” is provided for renewable fuels and fuels containing MTBE (i.e., such fuels cannot be deemed defective in design or manufacture by virtue of the fact that they contain renewables or MTBE). This provision applies to claims filed after the date of enactment.	<i>Sec. 820 (e).</i> Similar to the House provision, except that only renewable fuels would be protected.	The effect of this provision would be to protect anyone in the product chain, from manufacturers down to retailers, from liability for cleanup of MTBE and renewable fuels or for personal injury or property damage based on the nature of the product (a legal approach that has been used in California to require refiners to shoulder liability for MTBE cleanup). With liability for manufacturing and design defects ruled out, plaintiffs would be forced to demonstrate negligence in the handling of such fuels, a more difficult legal standard to meet.
<b>MTBE Ban.</b>	No provision.	No provision.	<i>Sec. 833(c).</i> Not later than four years after enactment, the use of MTBE in motor vehicle fuel is prohibited except in states that specifically authorize it. EPA may allow MTBE in motor vehicle fuel in quantities up to 0.5% in cases the Administrator determines to be appropriate.	

Provision	Current Law	House	Senate	Comments
<b>Transition from MTBE.</b>	No provision.	<i>Sec. 17103.</i> Section 211(c) of the Clean Air Act is amended to authorize \$250 million in each of FY 2004-2006 for grants to assist U.S. producers of MTBE in converting to the production of iso-octane and alkylates. The Secretary of Energy may make grants available for conversion to other fuel additives, unless EPA determines that such additives may reasonably be anticipated to endanger public health or the environment.	<i>Sec. 833(c).</i> Provisions for transition to substitute additives are similar to the House version. For FY2003-FY2005, \$250 million annually is authorized.	
<b>Authority for water quality protection from fuels.</b>	Sec. 211(c)(1) of the Clean Air Act allows the Administrator of the Environmental Protection Agency (EPA) to regulate fuels and fuel additives to prevent air pollution. However, the Act does not grant EPA the authority to regulate fuels to prevent water contamination.	No similar provision.	<i>Sec. 833(c).</i> Sec. 211(c)(1) of the Clean Air Act is amended to allow EPA to control or prohibit the sale of fuel and fuel additives in order to protect water quality, in addition to current authority based on protection of air quality.	

CRS-90

Provision	Current Law	House	Senate	Comments
<p><b>Elimination of oxygen content requirement for reformulated gasoline.</b></p>	<p>Section 211(k) of the Clean Air Act requires that reformulated gasoline (RFG) contain at least 2% oxygen by weight. Further, the section sets limits on reformulated gasoline volatility, toxic emissions, and other properties.</p>	<p><i>Sec. 17104.</i> Subsection (a) amends the Clean Air Act to eliminate the RFG oxygen requirement.</p> <p>Subsection (b) amends §211(k)(1) to require that each refinery or importer of gasoline maintain the average annual reductions in emissions of toxic air pollutants achieved by the reformulated gasoline it produced or distributed in 1999 and 2000.</p> <p>Subsection (b) also requires EPA to promulgate final regulations to control hazardous air pollutants from motor vehicles and their fuels by July 1, 2004.</p> <p>Subsection (c) eliminates the less stringent requirements for volatility applicable to reformulated gasoline sold in VOC Control Region 2 (northern states) by applying the more stringent standards of VOC Control Region 1 (southern states).</p>	<p><i>Sec. 834.</i> Similar to the House provision.</p>	<p>(a) This provision takes effect 270 days after enactment, except in California, where it takes effect immediately upon enactment.</p> <p>(b) This provision is intended to prevent backsliding, since the reductions actually achieved in those years exceeded the regulatory requirements. It establishes a credit trading program for emissions of toxic air pollutants.</p>

## CRS-91

Provision	Current Law	House	Senate	Comments
<b>Public health and environmental impacts of fuels and fuel additives.</b>	Under the Clean Air Act Amendments of 1990 (42 U.S.C. 7545(b)), the EPA Administrator may require manufacturers to conduct tests on the health effects of fuels and fuel additives.	No similar provision.	<i>Sec. 835.</i> The EPA Administrator must study the health and environmental effects of fuels and fuel additives. Manufacturers are also required to conduct tests on health and environmental effects.	
<b>Analyses of motor vehicle fuel changes.</b>	No provision.	<i>Sec. 17105.</i> A new §211(p) is added to the Clean Air Act. Within four years of enactment, the Administrator of the Environmental Protection Agency (EPA) must publish a draft analysis of the effects of the fuels provisions in the Act on air pollutant emissions and air quality. Within five years of enactment, the Administrator is required to publish a final version of the analysis.	<i>Sec. 836.</i> Identical to the House provision.	
<b>Data collection.</b>	No provision.	<i>Sec. 17106.</i> Requires DOE 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.	<i>Sec. 813.</i> Similar to the House provision.	

Provision	Current Law	House	Senate	Comments
<b>Fuel system requirements harmonization study.</b>	No provision.	<i>Sec. 17107.</i> The EPA Administrator and the Secretary of Energy are required to conduct a study of all federal, state, and local motor fuels requirements. They are required to analyze the effects of various standards on consumer prices, fuel availability, domestic suppliers, air quality, and vehicle emissions. Further, they are required to study the feasibility of developing national or regional fuel standards. A report must be published by December 31, 2006.	<i>Sec. 839.</i> Similar to the House provision, except that the report must be published by June 1, 2006.	
<b>Reducing the proliferation boutique fuels.</b>	Under the Clean Air Act, a state not required to use reformulated gasoline (RFG) may opt-in to the program, or establish its own gasoline standards (with certain restrictions) to meet air quality goals within its State Implementation Plan (SIP).	<i>Sec. 17107A.</i> A new provision is added to §211(c)(4) of the Clean Air Act. The EPA Administrator is directed to give preference to the approval of air quality SIPs that require the use of “Federal Clean Burning Gasoline” (defined as RFG with a Reid Vapor Pressure of 6.8 psi) or “Low RVP” gasoline (with a Reid Vapor Pressure of 7.8 psi).	No similar provision.	

## CRS-93

Provision	Current Law	House	Senate	Comments
<b>Additional opt-in areas under reformulated gasoline program.</b>	Under the Clean Air Act, Amendments of 1990 (42 U.S.C. 7545(k)), areas in severe or extreme nonattainment of ozone standards are required to use reformulated gasoline (RFG). Other nonattainment areas with less severe problems may opt-in to the RFG program.	No similar provision.	<i>Sec. 837.</i> Areas in compliance with ozone standards (that are within the ozone transport region) may also opt-in to the federal RFG program, unless there is insufficient supply of RFG.	The ozone transport region covers areas from the Washington, D.C. Metropolitan Statistical Area to the state of Maine.
<b>Federal enforcement of state fuels requirements.</b>	Under the Clean Air Act Amendments of 1990 (42 U.S.C. 7545(k)), states with less severe ozone nonattainment areas (that choose not to opt-in to the RFG program) may set their own fuel standards as part of a State Implementation Plan (SIP) for ozone.	No similar provision.	<i>Sec. 838.</i> If a state requests, EPA may enforce fuel requirements set in a state's SIP.	Currently, states are responsible for enforcing their own state-initiated fuel standards, while EPA enforces federal fuel standards.
<b>Commercial byproducts from municipal solid waste loan guarantee program.</b>	No provision.	<i>Sec. 17108.</i> The Secretary of Energy is required to establish a loan guarantee program for the construction of facilities to produce fuel ethanol and other commercial byproducts from municipal solid waste. The section authorizes such sums as may be necessary for the program.	<i>Sec. 820B.</i> Identical provision.	

Provision	Current Law	House	Senate	Comments
<b>Review of federal procurement initiatives relating to use of recycled products and fleet and transportation efficiency.</b>	<p>Executive Order 13149 directed federal agencies to increase the EPA-rated fuel economy of their passenger cars and to fuel alternative fuel vehicles (AFVs) with alternative fuels a majority of the time.</p> <p>Executive Order 13101 directed federal agencies to increase their use of recycled products.</p>	No similar provision.	<i>Sec. 840.</i> The Administrator of the General Services Administration must submit a report to Congress on efforts by federal agencies to purchase recycled products, purchase AFVs and alternative fuels, and improve federal vehicle fleet efficiency.	Most federal AFVs are dual-fuel vehicles (capable of being fueled by either an alternative or conventional fuel), and most of these are fueled with gasoline as opposed to alternative fuels.

## MTBE Cleanup

Provision	Current Law	House	Senate	Comments
<b>Funding for MTBE contamination.</b>	<p>The Solid Waste Disposal Act (42 U.S.C. 6991) provides for the regulation of underground storage tanks, including gasoline storage tanks. Among other provisions, the act allows regulations for the detection, prevention, and correction of releases of regulated substances.</p>	<i>Sec. 17201.</i> Appropriations are authorized to EPA from the Leaking Underground Storage Tank (LUST) Trust Fund for actions deemed necessary to protect human health, welfare, and the environment from underground storage tank releases of fuel containing fuel oxygenates (including MTBE). A total of \$850 million is authorized.	<i>Sec. 832.</i> Funds are authorized from the LUST Trust Fund for the prevention and mitigation of contamination by ether fuel additives, including MTBE. The following funds are authorized for FY2003-FY2008: \$200 million total for for general MTBE remediation; \$200 million total for release prevention; \$2 million total for research on bedrock remediation; and \$350,000 total for research on soil remediation.	MTBE, a common additive in gasoline, has been found to contaminate underground drinking water sources in several states.

## Automobile Efficiency

Provision	Current Law	House	Senate	Comments
<p><b>Increased fuel economy standards.</b></p>	<p>The Energy Policy and Conservation Act (P.L. 94-163), enacted in 1975, established procedures whereby the National Highway Traffic Safety Administration (NHTSA) follows a rulemaking process to establish model year Corporate Average Fuel Economy (CAFE) standards for passenger automobiles and light-duty trucks. Fuel economy of passenger automobiles is currently 27.5 mpg; light-duty truck CAFE is 20.7 mpg.</p>	<p>No comparable provision.</p>	<p><i>Sec. 801.</i> The Secretary of Transportation must issue not later than 15 months after enactment “new regulations setting forth increased fuel economy standards” reflecting “maximum feasible fuel economy levels” consistent with factors set out in the original CAFE legislation (P.L. 94-163). (However, Sec. 811 freezes “pickup truck” CAFE at 20.7 mpg.) An environmental assessment is required of the effects of the new standards.</p>	<p>Though the House language does not specifically call for an increase in CAFE standards or for NHTSA to initiate a rulemaking, there is an implied assumption that NHTSA will undertake a rulemaking as provided in current law. By contrast, the Senate bill requires that the agency do so under a schedule specified in the legislation.</p>
<p><b>Authorization of appropriations for implementation and enforcement of fuel economy standards.</b></p>	<p>No provision.</p>	<p><i>Sec. 18001.</i> An authorization of \$5 million is provided for the implementation and enforcement of CAFE standards for FY2004-FY2006.</p>	<p><i>Sec. 801.</i> \$2 million is authorized to carry out this section.</p>	

## CRS-96

Provision	Current Law	House	Senate	Comments
<b>Study of feasibility and effects of reducing use of fuel for automobiles.</b>	No provision.	<i>Sec. 18002.</i> The National Highway Traffic Safety Administration (NHTSA) must initiate a study of the feasibility and effects of reducing automobile fuel use “by a significant percentage” by model year 2012. The study is to examine alternatives to the present system of CAFE standards, and examine the potential of fuel cell technology in achieving that reduction.	No comparable provision.	
<b>Expedited procedures for congressional increase in fuel economy standards.</b>	No current law.	No comparable provision.	<i>Sec. 802.</i> In the event that the Secretary of Transportation does not comply with Sec. 801 within 15 months of enactment, Congress may establish CAFE standards under expedited procedures.	Sec. 802 does not specify what CAFE standard Congress may enact under expedited procedures.

Provision	Current Law	House	Senate	Comments
<p><b>Considerations to be taken into account in setting maximum feasible average fuel economy standards.</b></p>	<p>Current law requires Secretary of Transportation to consider “technological feasibility, economic practicability, the effect of other motor vehicle standards of the Government on fuel economy, and the need of the United States to conserve energy.” [49 Sec. 32902(2)(f)]</p>	<p>No comparable provision.</p>	<p><i>Sec. 803.</i> In addition to considerations in current law, the Secretary of Transportation must consider: (1) CAFE effects on reducing U.S. dependence on imported oil; (2) motor vehicle and passenger safety; (3) air quality; (4) the relative competitiveness of manufacturers; (5) levels of employment in the United States; (6) the cost and lead time for new technologies; (7) potential benefits of advanced technology vehicles; (8) impact of manufacturers’ near-term compliance costs on their ability to develop advanced technologies (9) the January 2002 CAFE report of the National Research Council.</p>	<p>The Senate legislation considerably lengthens the number of conditions to be analyzed and weighed by the National Highway Traffic Safety Administration in setting standards. The implications, if any, for the rule-making process are unclear.</p>
<p><b>Extension of maximum fuel economy increase for alternative vehicles.</b></p>	<p>Manufacturers earn a “CAFE credit” for producing dual-fueled vehicles. The maximum increase in a manufacturer’s CAFE owing to inclusion of dual-fueled vehicles in its fleet is limited to 1.2 mpg for model years 1993-2004, and 0.9 mpg for model years 2005-2008.</p>	<p>No comparable provision.</p>	<p><i>Sec. 804.</i> Maximum increase in a manufacturer’s CAFE owing to inclusion of dual-fueled vehicles in its fleet is limited to 1.2 mpg for model years 1993-2008, and 0.9 mpg for model years 2009-2013.</p>	<p>The fuel economy study by the National Academy of Sciences (NAS) recommended elimination of the credit, contending that these vehicles are rarely operated on anything but conventional gasoline, while the credit permits the manufacturer to sell less-efficient vehicles.</p>

CRS-98

Provision	Current Law	House	Senate	Comments
<p><b>Average fuel economy standard for pickup trucks.</b></p>	<p>No specific provision.</p>	<p>No comparable provision.</p>	<p><i>Sec. 811.</i> The CAFE standard for “pickup trucks” is frozen at 20.7 mpg, the current standard for light-duty trucks.</p>	<p>The Senate bill would appear to require some definition of a third category of vehicle – “pickup trucks” – in addition to passenger cars and light-duty trucks. Depending upon how pickups are defined, the Senate provision might not exclude SUVs and vans from future rulemakings to set a higher CAFE standard.</p>

## Science

Provision	Current Law	House	Senate	Comments
<p><b>Purposes, Goals &amp; Definitions.</b></p> <p><b>Energy research and development programs.</b></p>	R&D programs are currently funded, but there are no existing goals for reducing energy intensity, curbing energy use, and cutting carbon dioxide emissions.	<p><i>Secs. 20001- 20003.</i> The programs authorized in this division of the bill are intended to support basic energy research and provide mechanisms to develop, demonstrate, and promote the commercial application of new energy technologies. Specific goals are provided for each research area, such as the development by 2010 of mid-sized passenger automobiles with a fuel economy of 80 miles per gallon.</p>	<p><i>Sec. 1201-1204.</i> A DOE energy R&amp;D and deployment program is charged with the goals of reducing energy intensity by 1.9% annually through 2020, reducing total energy use by 8 quadrillion Btu by 2020, and reducing carbon dioxide by 166 million metric tons by 2020.</p>	

## Research and Development

### Energy Efficiency

Provision	Current Law	House	Senate	Comments
<p><b>Energy efficiency.</b></p>	Funding authorizations have expired.	<p><i>Sec. 21101.</i> Funding for the DOE energy efficiency programs is authorized for FY2004 through FY2007.</p>	<p><i>Sec. 1211.</i> Numerous goals are set for the DOE energy efficiency programs. Also, funding for the programs is authorized for FY2003 through FY2006.</p>	

CRS-100

Provision	Current Law	House	Senate	Comments
<b>Next Generation Lighting Initiative.</b>	No existing requirement.	<i>Sec. 21111.</i> A DOE program is created that aims to develop, by 2012, advanced white light-emitting diodes for high efficiency lighting.	<i>Sec. 1213.</i> A DOE program is created that aims to develop, by 2011, advanced white light-emitting diodes for high energy efficiency in lighting.	
<b>Energy Efficiency of Electronic Data Centers.</b>	No specific provision.	No provision.	<i>Sec. 1215.</i> DOE must create an RD&D program to improve energy efficiency and load management of data centers, server farms, and other high power density facilities.	
<b>National Building Performance Initiative.</b>	No existing provision.	<i>Sec. 21121.</i> An interagency group is established to address energy efficiency R&D for buildings. The National Institute of Standards and Technology is directed to provide administrative support.	No provision.	
<b>Electric motor control technology.</b>	No existing requirement.	<i>Sec. 21122.</i> DOE is directed to develop advanced control devices to improve the efficiency of motors used in heating, ventilation, air conditioning, and related equipment.	No provision.	

CRS-101

Provision	Current Law	House	Senate	Comments
<b>Establishment of secondary electric vehicle battery use program.</b>	No provision.	<i>Sec. 21131 and Sec. 21132.</i> A program is established for research and development on applications for used electric vehicle batteries in utility and commercial power storage and power quality.	No similar provision.	
<b>Energy Efficiency Science Initiative.</b>	Though there is no statutory authority, congressional initiatives have repeatedly funded this DOE program for several years. It is administered jointly by the Office of Energy Efficiency and Renewable Energy and the Office of Science.	<i>Sec. 21141.</i> A program for competitive grants is created. An annual report is to be filed with the DOE budget request. Funding authorization is included as part of a blanket authorization in Section 21101.	<i>Sec. 1212.</i> Statutory authority is provided for the program and funding up to \$50 million annually is authorized indefinitely. Also, DOE is directed to prepare an annual report on the program.	
<b>Advanced Energy Technology Transfer Centers.</b>	No existing requirement.	<i>Sec. 21151.</i> DOE is directed to create a program that makes grants for demonstration and commercial application, requiring a 50% non-federal funding match.	No provision.	

**Distributed Energy and Electric Energy Systems**

Provision	Current Law	House	Senate	Comments
<b>Distributed energy and electric energy systems.</b>	No specific provision.	<i>Sec. 21201.</i> Funding for the DOE distributed energy, electric energy, and micro-generation programs is authorized for FY2004 through FY2007.	No provision.	

CRS-102

Provision	Current Law	House	Senate	Comments
<b>Strategy.</b>	No existing requirement.	<i>Sec. 21211.</i> DOE is directed to prepare a study (strategy), and identify barriers, for hybrid distributed power systems that use renewables, storage, and interconnection equipment.	No provision.	
<b>High power density industry program.</b>	No specific provision.	<i>Sec. 21212.</i> DOE must create a research, development, and demonstration (RD&D) program to improve energy efficiency and load management of data centers, server farms, and other high power density facilities.	No provision.	
<b>Micro-cogeneration energy technology.</b>	No specific provision.	<i>Sec. 21213.</i> DOE is directed to make competitive grants to consortia to develop micro-cogeneration technology, including that which can be used for residential heating.	No provision.	

CRS-103

Provision	Current Law	House	Senate	Comments
<p><b>Transmission infrastructure systems research, development, demonstration, and commercial application.</b></p>	<p>No current law.</p>	<p><i>Sec. 21221.</i> The Secretary of Energy is directed to implement a program to promote reliability and efficiency of the electric transmission system. Within one year of enactment, the Secretary of Energy is to submit to Congress a report detailing the program's five year plan. Within two years of enactment, the Secretary of Energy is to submit to Congress a report detailing the progress of the program.</p>	<p>No provision.</p>	

## Renewable Energy

Provision	Current Law	House	Senate	Comments
<b>Renewable energy.</b>	General DOE authority (various statutes).	<i>Sec. 21301.</i> Funding for the DOE renewable energy programs is authorized for FY2004 through FY2007.	<i>Sec. 1221.</i> The Secretary of the Energy is required to conduct research, development, demonstration, and deployment projects on renewable energy, including wind, solar, biomass, and geothermal energy. Special projects include improving electricity delivery to rural and remote areas. A total of \$2.51 billion is authorized for FY2003 through FY2006.	
<b>Bioenergy programs.</b>	No existing provision.	<i>Sec. 21311.</i> DOE is directed to conduct programs on biofuels and biopower.	<i>Sec. 1222.</i> The Secretary of Energy is required to conduct research, development, demonstration, and deployment projects on bioenergy, including biopower (electricity and process heat generation) and biofuels (liquid fuels, gaseous fuels, and industrial chemicals). For FY2003 through FY2006, a total of \$295 million is authorized for biopower research, and \$281 million for biofuels research.	

CRS-105

Provision	Current Law	House	Senate	Comments
<b>Miscellaneous projects.</b>	General DOE authority for energy programs. There is no existing requirement for National Academy of Sciences (NAS) study.	<i>Sec. 21321.</i> DOE is directed to conduct programs on ocean and wave energy, combinations of renewable energy, and wind energy combined with coal gasification. NAS is directed to study the potential for various forms of ocean energy.	No provision.	
<b>Renewable energy in public buildings.</b>	General DOE authority. There is no specific requirement for projects in public buildings.	<i>Sec. 21322.</i> DOE must conduct an innovative program to put renewables in state and local buildings, funding up to 40% of a project's incremental costs.	No provision.	

## Nuclear Energy

Provision	Current Law	House	Senate	Comments
<p><b>Nuclear energy research and development authorizations.</b></p>	<p>DOE shall carry out and support research and development activities related to nuclear energy (Atomic Energy Act Section 31).</p>	<p><i>Sec. 21401.</i> Funding is authorized for FY2004-FY2007 for DOE nuclear energy research, development, demonstration, and commercial application activities.</p>	<p><i>Sec. 1241.</i> DOE shall conduct an R&amp;D program to enhance nuclear energy. The program shall support improvements in existing commercial reactors, examine advanced reactor designs, attract new nuclear science and engineering students, and maintain isotope production capability. Funding is authorized for FY2003 through FY2006.</p>	<p>General authority for all DOE nuclear energy R&amp;D activities is provided by the Atomic Energy Act of 1954 (AEA) and the Department of Energy Organization Act (P.L. 95-91).</p>

Provision	Current Law	House	Senate	Comments
<p><b>Nuclear energy research programs.</b></p>	<p>No specific provision.</p>	<p><i>Sec. 21411.</i> DOE shall conduct a Nuclear Energy Research Initiative, a Nuclear Energy Plant Optimization Program, a Nuclear Power 2010 Program, a Generation IV Nuclear Energy Systems Initiative, and Nuclear Infrastructure Support.</p>	<p><i>Sec. 514.</i> DOE shall conduct a cost-shared program with industry to “allow for the construction and startup of new nuclear plants in the United States by 2010.”</p> <p><i>Sec. 1243.</i> From funding authorized for Enhanced Nuclear Energy Research and Development (Section 1241), DOE shall provide grants under the Nuclear Energy Research Initiative (NERI).</p> <p><i>Sec. 1244.</i> From amounts authorized under Section 1241, DOE shall support a Nuclear Energy Plant Optimization (NEPO) grants program for projects to improve nuclear power plant reliability, availability, and productivity. The program shall require industry cost-sharing of at least 50%.</p> <p>(Continued in next row)</p>	<p>These programs have been funded in recent years without a specific authorization.</p>

Provision	Current Law	House	Senate	Comments
<p><b>Nuclear energy research programs (continued from row above).</b></p>	<p>No specific provision.</p>	<p><i>Sec. 21411.</i></p>	<p><i>Sec. 1245</i> (continued from row above). From amounts authorized under Section 1241, DOE shall develop a “technology roadmap” for designing and developing new U.S. commercial nuclear reactors. The roadmap shall include a study of advanced, “Generation IV” reactor designs to support a decision on selecting the most promising of those designs for commercial deployment.</p>	<p>These programs have been funded in recent years without a specific authorization.</p>
<p><b>Advanced fuel recycling program.</b></p>	<p>DOE shall conduct a research program on alternative means and technologies for disposal of high-level radioactive waste (42 U.S.C. 10202).</p>	<p><i>Sec. 21421.</i> DOE’s Office of Nuclear Energy, Science, and Technology shall conduct a research and development program on advanced technologies for the reprocessing of spent nuclear fuel. The technologies should be resistant to nuclear weapons proliferation and support alternative spent fuel disposal strategies and Generation IV advanced reactor concepts.</p>	<p><i>Sec. 515.</i> A DOE Office of Spent Nuclear Fuel Research is established to research, develop, and demonstrate technologies for treatment, recycling, and disposal of spent nuclear fuel and high-level radioactive waste. The technologies should be based on reactors and accelerators and minimize nuclear weapons proliferation concerns.</p>	<p>Spent fuel recycling or reprocessing involves the extraction of plutonium and uranium from spent nuclear fuel for use in new fuel. Supporters contend that it could extend domestic energy supplies and reduce the hazard posed by nuclear waste, while opponents are concerned that the extracted plutonium could be used for weapons.</p>

Provision	Current Law	House	Senate	Comments
<b>University nuclear science and engineering support.</b>	DOE may provide grants and contributions to the cost of construction and operation of university reactors (AEA Section 31).	<i>Sec. 21431.</i> DOE shall establish a program to enhance human resources and infrastructure in nuclear engineering and science. The program shall provide graduate and undergraduate fellowships; assist in faculty recruitment and retention; support nuclear engineering and science research; encourage collaborative research; help maintain and operate university reactors; and conduct related activities.	<i>Sec. 1242.</i> DOE shall provide support to university nuclear science and engineering programs, including programs to help students and faculty, helping to maintain university reactors and infrastructure, and interaction between university nuclear programs and DOE national laboratories. Funding is authorized for FY2003 through FY2006.	The provisions would add new statutory requirements for the existing DOE University Reactor Fuel Assistance and Support Program.
<b>Study of borehole disposal of spent nuclear fuel.</b>	DOE is developing a mined underground repository for disposal of spent nuclear fuel and high level waste (Nuclear Waste Policy Act of 1982, 42 U.S.C. 10101 et seq.).	<i>Sec. 21441.</i> DOE shall study the feasibility of deep borehole disposal of spent nuclear fuel and high level waste.	No provision.	Boreholes could potentially go much deeper than the currently planned repository at Yucca Mountain, Nevada.
<b>Study of shipping routes for research reactor spent fuel.</b>	No provision.	No provision.	<i>Sec. 1707.</i> The National Academy of Sciences shall study federal procedures for selecting transportation routes for spent nuclear fuel from research reactors.	

## Fossil Energy

Provision	Current Law	House	Senate	Comments
<b>Fossil energy.</b>	No specific provision.	<i>Sec. 21501.</i> Funding levels are authorized for fossil energy research and development activities for FY2004-FY2007. A percentage of the revenue from federal oil and gas lease sales shall be deposited in the Ultra-deepwater and Unconventional Natural Gas and Other Petroleum Research Fund, from which funding is authorized for related research programs.	See <i>Sec. 1231</i> for authorizations.	Although there is currently no specific authorization, funding for fossil energy research and development programs is appropriated through the Interior and Related Agencies appropriations bill.
<b>Fossil energy research programs.</b>	No specific provision.	<i>Sec. 21511.</i> DOE shall conduct coal R&D that includes carbon sequestration, advanced separation technologies, and fuels. Oil and gas R&D shall include gas hydrates, ultra clean fuels, heavy oil and oil shale, and environmental research. Research into fuel cells and technology transfer are also specified.	<i>Sec. 1231.</i> DOE shall conduct a balanced fossil energy research, development, demonstration, and technology deployment program. The program focus includes reducing emissions from fossil fuels, developing offshore resources, and enhancing domestic supply and technology for independent producers. Funding is authorized for FY2003-FY2006.	R&D for gas hydrates, ultra-clean fuels and heavy oil are funded through the DOE's Fossil Energy Program.

CRS-111

Provision	Current Law	House	Senate	Comments
<b>Safe and efficient mining technologies.</b>	Coal R&D in the DOE budget is funded under the Fossil Energy Program.	<i>Sec. 21512.</i> R&D priorities are to be carried out according to the Mining Industry of the Future program and NAS recommendations.	<i>Sec. 1233.</i> A federal-private sector research partnership is set up to establish research priorities for advanced coal mining technologies.	
<b>R&amp;D for new natural gas transportation technologies.</b>	No specific provision.	No comparable provision.	<i>Sec. 1235.</i> DOE shall conduct a comprehensive R&D program on natural gas transportation and distribution technologies and distributed energy systems.	
<b>Office of Arctic Energy authorization.</b>	Office established by Sec. 3197 of P.L. 106-398.	No comparable provision.	<i>Sec. 1236.</i> Funding is authorized for the Office of Arctic Energy.	
<b>Outer Continental Shelf (OCS) energy infrastructure security.</b>	Deepwater OCS activity is conducted under the Outer Continental Shelf of 1953 (43 U.S.C. 1331).	No comparable provision.	<i>Sec. 1811.</i> The Secretary of the Interior shall establish an OCS Energy Infrastructure Security Program to provide funds to states to protect against threats to OCS facilities and related infrastructure.	
<b>Program authority.</b>	No specific provision.	<i>Sec. 21521.</i> R&D is authorized for technology development and application for ultra-deepwater and unconventional natural gas and other petroleum.	<i>Sec. 1234.</i> DOE shall establish a program to conduct long-term R&D into ultra-deepwater development and environmental mitigation technologies.	R&D programs for oil and gas are funded under the Fossil Energy Program in the Interior and Related Agencies appropriations bill.

CRS-112

Provision	Current Law	House	Senate	Comments
<b>Ultra-deepwater program.</b>	No provision.	<i>Sec. 21522.</i> The Secretary of Energy shall establish a Program Consortium to plan for R&D activities in ultra-deepwater natural gas and other petroleum resources.	<i>Sec. 1234.</i> DOE shall establish a program to conduct long-term R&D into ultra-deepwater development and environmental mitigation technologies.	
<b>Unconventional natural gas and other petroleum resources program.</b>	No provision.	<i>Sec. 21523.</i> The Secretary of Energy shall seek to increase the supply of “focus area” resources such as coalbed methane, tight sands natural gas, and gas shales. Awards shall also focus on deep drilling, enhanced oil recovery, and environmental mitigation.	<i>Sec. 607.</i> The Secretary of the Interior and others shall study the effects of coalbed methane production on water resources.	
<b>Additional requirements for awards.</b>	No provision.	<i>Sec. 21524.</i> Funding applicants must describe the intended use of the technology that will be demonstrated.	No comparable provision.	
<b>Advisory committees.</b>	None.	<i>Sec. 21525.</i> An Ultra-deepwater Advisory Committee and an Unconventional Resources Technology Advisory Committee shall be established.	No comparable provision.	

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Provision	Current Law	House	Senate	Comments
<b>Limits on participation.</b>	None.	<i>Sec. 21526.</i> Criteria for foreign-owned participants in the program are established. It is also the sense of Congress that the program's primary purpose is to develop U.S. oil and gas supply.	No comparable provision.	
<b>Research fund.</b>	None.	<i>Sec. 21527.</i> The Ultra-deepwater and Unconventional Natural Gas and Other Petroleum Research Fund shall be established.	No comparable provision.	
<b>Transfer of advanced oil and gas exploration and production technologies.</b>	None.	<i>Sec. 21528.</i> The Secretary of Energy shall review technology programs and select an organization to manage the transfer of suitable technologies.	No comparable provision.	
<b>Sunset.</b>	None.	<i>Sec. 21529.</i> The authority for this part terminates in 2010.	No comparable provision.	
<b>Definitions.</b>	None	<i>Sec. 21530.</i> A number of terms used in this part are defined.	No comparable provision.	

**Science**

Provision	Current Law	House	Senate	Comments
<p><b>Authorization of appropriations for the Office of Science.</b></p>	<p>General authority is provided by DOE Organization Act (P.L. 95-91).</p>	<p><i>Sec. 21601.</i> Appropriations are authorized for the Office of Science for fiscal years 2004 through 2007, with increases of 10-15% per year. Within these totals, appropriations are authorized for certain specific programs and activities of the Office.</p>	<p><i>Sec. 1251.</i> Appropriations are authorized for the Office of Science for fiscal year 2003 (an increase of approximately 20% above the 2002 appropriation) and subsequent fiscal years through 2006 (annual increases of approximately 10%). Broad program direction is provided regarding scientific scope, the role of facilities, the importance of certain research areas, and connections with the Department's applied programs.</p>	

Provision	Current Law	House	Senate	Comments
<b>ITER (international fusion research project).</b>	General DOE authority.	<i>Sec. 21611.</i> The United States may participate in the international fusion energy experiment known as ITER. Criteria are specified for any agreement on U.S. participation. DOE shall develop a plan for ITER participation and have it reviewed by the National Academy of Sciences. Funds may not be expended for construction until the plan and other reports are provided to Congress. See Sec. 21601 for authorization of appropriations.	<i>Sec. 1254.</i> The Secretary shall submit an overall plan for the nuclear fusion program, including certain specified objectives. In addition, the Secretary shall submit a plan for construction of a burning plasma experiment in the United States. If the Secretary makes certain findings, he may also submit a plan for U.S. participation in an international burning plasma experiment. Appropriations are authorized for fiscal year 2003 (an increase of approximately 35% above the 2002 appropriation) and for subsequent fiscal years through 2006.	The United States withdrew from the design phase of ITER in 1998 at congressional direction, largely because of concerns about cost and scope. The project has since been restructured, and in January 2003, the Administration announced its intention to reenter the project. Other international partners include the European Union, Japan, Russia, and China.
<b>Plan for alternative fusion experiment.</b>	General DOE authority.	<i>Sec. 21612.</i> If DOE determines that construction and operation of ITER are unlikely or infeasible, it shall submit a plan for another proposed fusion energy experiment, known as FIRE. See Sec. 21601 for authorization of appropriations.	(See <i>Sec. 1254</i> above.)	The scientific goals of FIRE are related to those of ITER but are less comprehensive and on a smaller scale. FIRE would be based in the United States.

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Provision	Current Law	House	Senate	Comments
<b>Plan for Fusion Energy Sciences program.</b>	General DOE authority.	<i>Sec. 21613.</i> Competitiveness in fusion energy, including a demonstration of electric power or hydrogen production, shall be U.S. policy. DOE shall submit a plan to carry out that policy. The plan shall be subject to certain requirements. See <i>Sec. 21601</i> for authorization of appropriations for the Fusion Energy Sciences program.	(See <i>Sec. 1254</i> above.)	Fusion Energy Sciences is an existing Office of Science program.
<b>Spallation Neutron Source.</b>	No specific authorization.	<i>Secs. 21621-21623.</i> DOE shall report on the Spallation Neutron Source (SNS), including its cost and schedule, in its annual budget submissions. DOE obligations for the SNS, including prior year costs, may not exceed \$1.193 billion (construction only) and \$1.412 billion (total). See <i>Sec. 21601</i> for authorization of appropriations.	No similar provision.	Construction of the SNS is scheduled to be completed in 2006. Although there is no specific authorization, this project has been funded through Energy and Water Development Appropriations Acts since FY1999.
<b>Facility and infrastructure support for nonmilitary energy laboratories.</b>	No provision.	<i>Sec. 21631.</i> DOE shall develop, implement, and report on a strategy for the nonmilitary energy laboratories and facilities of the Office of Science.	No similar provision.	

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Provision	Current Law	House	Senate	Comments
<b>Research regarding precious metal catalysis.</b>	General DOE authority.	<i>Sec. 21632.</i> Appropriations are authorized for research on the use of precious metals (except platinum, palladium, and rhodium) in catalysis.	<i>Sec. 1216.</i> The Secretary of Energy may conduct research in the use of precious metals other than platinum, palladium and rhodium for use in automotive catalytic converters.	Platinum, palladium and rhodium are the three major precious metals currently used in the in automotive catalytic converters.
<b>Nanotechnology research and development.</b>	General DOE authority.	<i>Sec. 21633.</i> DOE shall implement a Nanotechnology R&D Program with specified goals and activities. Within two years, DOE shall report to Congress on its efforts to identify societal and ethical concerns related to nanotechnology.	<i>Sec. 1252.</i> A nanoscience and nanoengineering R&D program, including research centers and major instrumentation, is established within the Office of Science. Appropriations for fiscal years 2003 through 2006 are authorized as part of the overall authorization given in Sec. 1251.	Nanotechnology R&D is currently conducted in the Basic Energy Sciences program of the Office of Science.

Provision	Current Law	House	Senate	Comments
<b>Advanced scientific computing for energy missions.</b>	Existing DOE advanced computing programs are conducted under the High Performance Computing Act of 1991 (15 U.S.C. 5523) and general DOE authority.	<i>Sec. 21634.</i> DOE shall support advances in the nation's computing capability through research on grand challenge computational science problems. The Networking and Information Technology R&D Program shall conduct research on specified topics and shall be coordinated with related activities in DOE and elsewhere. DOE shall report to Congress before undertaking any new initiative to develop advanced architectures for high-speed computing.	<i>Sec. 1253.</i> The Office of Science's advanced scientific computing program is expanded to include, as well as research, the deployment of high-performance computing and collaboration tools for research in DOE mission areas. Appropriations are authorized for fiscal year 2003 (an increase of approximately 75% above the 2002 appropriation) and for subsequent fiscal years through 2006.	The Advanced Scientific Computing Research program of the Office of Science currently conducts computing research.
<b>Nitrogen fixation.</b>	General DOE authority.	<i>Sec. 21635.</i> DOE shall support a program of research, development, demonstration, and commercial application on biological nitrogen fixation.	No similar provision.	

Provision	Current Law	House	Senate	Comments
<b>Department of Energy Science and Technology Scholarship Program.</b>	No provision.	<i>Sec. 21636.</i> DOE shall establish a scholarship program designed to recruit and prepare students for careers in DOE. Scholarship recipients are obligated to work for DOE for 24 months per year of scholarship received.	<p><i>Sec. 1501.</i> The Energy Information Administration shall monitor trends in the energy industry technical workforce, include statistics on these trends in its annual reports, and report to Congress when a significant personnel shortfall occurs or is forecast. A grant program is created for training technical personnel in shortfall areas.</p> <p><i>Sec. 1502.</i> A program of postdoctoral fellowships in energy R&amp;D is established. The Secretary may arrange for this program to be administered by the National Academy of Sciences. A program of senior research fellowships in energy R&amp;D is also established.</p>	
<b>Training guidelines for electric energy industry personnel.</b>	None.	No similar provision.	<i>Sec. 1503.</i> DOE must work with utilities and unions to create model employee training guidelines to increase electric reliability.	

Provision	Current Law	House	Senate	Comments
<b>National Power Plant Operations Technology and Education Center.</b>	None.	No similar provision.	<i>Sec. 1506.</i> DOE must establish a center to conduct training and certification of operators at electric power generating plants.	
<b>Genomes to life.</b>	General DOE authority.	<i>Sec. 21641.</i> DOE shall establish a research, development, and demonstration program in genetics, protein science, and computational biology of microbes and plants, with specified goals. Within one year, DOE shall submit a research plan for this program to the Congress and contract with NAS to review the plan within an additional six months.	No similar provision.	Genomes to Life is an existing activity in the Biological and Environmental Research program of the Office of Science.

## Energy and Environment

Provision	Current Law	House	Senate	Comments
<b>Authorization of appropriations for environmental programs.</b>	No specific provision.	<i>Sec. 21701.</i> Funding is authorized for DOE to support United States - Mexico energy cooperation and for a program to reduce material wastes.	No provision.	

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Provision	Current Law	House	Senate	Comments
<b>United States-Mexico energy technology cooperation.</b>	No existing provision.	<i>Sec. 21702.</i> DOE is directed to create a program in its Carlsbad Environmental Management Field Office focused on energy-efficient and environmentally sound economic development along the U.S.-Mexico border.	<i>Sec. 1414.</i> A collaborative RD&D program is established in the DOE Office of Environmental Management to promote energy-efficient, environmentally sound economic development along the United States-Mexico border.	
<b>Waste reduction and use of alternatives.</b>	No existing requirement.	<i>Sec. 21703.</i> DOE is authorized to make a single grant to a university to study the feasibility of burning post-consumer carpet in cement kilns.	No provision.	
<b>Coal gasification.</b>	No provision.	<i>Sec. 21704.</i> Loan guarantees are authorized for a power plant using integrated combined cycle technology, producing in a deregulated market, and receiving no subsidy.	See <i>Sec. 1232.</i> (Senate index is at the end of this report.)	
<b>Petroleum coke gasification.</b>	No specific provision	<i>Sec. 21705.</i> Loan guarantees are authorized for at least one petroleum gasification polygeneration project.	No comparable provision.	

CRS-122

Provision	Current Law	House	Senate	Comments
<b>Other biopower and bioenergy.</b>	No specific provision.	<i>Sec. 21706.</i> DOE must conduct a program to help plan projects to convert certain biomass sources (e.g. rice straw, poultry fat, barley grain) into biopower and biofuels.	No provision.	
<b>Coal technology loan.</b>	No specific loan provision	<i>Sec. 21707.</i> A \$125 million loan is authorized for DOE project #DE-FC22-91PC99544.	<i>Sec. 1237.</i> Funding is authorized for a \$125 million loan to an experimental clean coal plant.	This refers to a clean coal demonstration project in Healy, Alaska.
<b>Fuel cell test center.</b>	No provision.	<i>Sec. 21708.</i> The Secretary of Energy is required to study the establishment of a test center for advanced fuel cells at an institution of higher learning. A total of \$500,000 is authorized for this study.	No similar provision.	
<b>Fuel cell transit bus demonstration.</b>	No provision.	<i>Sec. 21709.</i> A program is established to demonstrate up to 12 fuel cell transit buses in three geographically dispersed locations. A total of \$40 million is authorized for FY2004 through FY2007.	No similar provision.	Various programs under the Transportation Equity Act for the 21 <sup>st</sup> Century (TEA-21, PL. 105-178) provide funding for transit projects. Funds from these programs could be used for fuel cell bus projects.

Provision	Current Law	House	Senate	Comments
<b>Safe Drinking Water grant and preservation of oil and gas resource data.</b>	No provision.	No provision.	<i>Secs. 611-612.</i> Funding is authorized for a grant to Alabama under the Safe Drinking Water Act, and the U.S. Geological Survey may preserve and provide public access to oil and gas resource data.	

**Management**

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	No provision.	No similar provision.	<i>Sec. 1401.</i> The term “single-purpose research facility” includes 15 named DOE-owned facilities and any similar DOE organization designated as such by the Secretary.	
<b>Availability of funds.</b>	No existing provision.	<i>Sec. 21801.</i> DOE funds for this title are made available until expended.	<i>Sec. 1402.</i> Appropriations authorized under titles XII (energy R&D), XIII (climate change R&D), and XV (traineeships and fellowships) shall remain available until expended.	

Provision	Current Law	House	Senate	Comments
<p><b>Cost sharing.</b></p>	<p>No specific provision; various energy statutes include cost-sharing requirements.</p>	<p><i>Sec. 21802.</i> Except as otherwise provided in this title, DOE shall generally require at least a 20% match for R&amp;D projects and a 50% match for demonstration projects. The matching requirement can be reduced for certain reasons.</p>	<p><i>Sec. 1403.</i> Cost-sharing is required for DOE projects in energy efficiency R&amp;D, renewable energy R&amp;D, fossil energy R&amp;D, and nuclear energy R&amp;D. The non-federal share must be at least 20% for research and development projects and at least 50% for demonstration and deployment projects. The Secretary may waive or reduce these requirements under certain conditions.</p>	
<p><b>Merit review of proposals.</b></p>	<p>No specific provision.</p>	<p><i>Sec. 21803.</i> An impartial review of scientific and technical merit is required before DOE may award funds authorized under this title.</p>	<p><i>Sec. 1404.</i> An independent review of scientific and technical merit shall be conducted before a proposal can be funded from appropriations authorized under title XII (energy R&amp;D), subtitle A of title XIII (DOE climate change R&amp;D), or title XV (traineeships and fellowships).</p>	

Provision	Current Law	House	Senate	Comments
<p><b>External technical review of departmental programs.</b></p>	<p>General authority for DOE advisory committees is provided by 42 U.S.C. 7234.</p>	<p><i>Sec. 21804.</i> Advisory boards shall be established for DOE R&amp;D programs in energy efficiency, renewable energy, fossil energy, nuclear energy, and climate change technology. The requirement may be met by existing DOE boards or by boards established by the National Academy of Sciences. Existing advisory committees shall continue for R&amp;D programs of the Office of Science.</p>	<p><i>Sec. 1405.</i> Same.</p>	
<p><b>Improved coordination of technology transfer activities.</b></p>	<p>No specific provision.</p>	<p><i>Sec. 21805.</i> A Technology Transfer Coordinator is established to oversee DOE technology transfer activities and coordinate the activities of a Technology Partnership Working Group. The Working Group is to be established with representatives of the DOE national laboratories and single-purpose research facilities.</p>	<p><i>Sec. 1407.</i> A Technology Partnership Working Group is established, consisting of representatives of the DOE national laboratories and single-purpose research facilities, to coordinate technology transfer. A Technology Transfer Coordinator is established to oversee DOE technology transfer activities and coordinate the activities of the Technology Partnership Working Group.</p>	

Provision	Current Law	House	Senate	Comments
<b>Technology infrastructure program.</b>	No specific provision.	No similar provision.	<i>Sec. 1408.</i> A program is established to help national laboratories and single-purpose research facilities stimulate the development of technology clusters, “leverage and benefit” from commercial activities, and exchange scientific and technological expertise with other organizations. A report must be submitted by January 1, 2004, on whether the program should continue and, if so, how it should be managed.	
<b>Small business advocacy and assistance.</b>	No existing provision.	<i>Sec. 21806.</i> The Secretary of Energy must require each national laboratory to designate a small business advocate to increase small businesses’ participation in programs and to provide training and technical assistance for them. DOE may also require that an advocate be appointed at each single-purpose research facility.	<i>Sec. 1409.</i> A small business assistance program is established. A small business advocate must be appointed at each national laboratory and, if directed by the Secretary, at each single-purpose research facility.	

Provision	Current Law	House	Senate	Comments
<b>Other transactions authority.</b>	42 U.S.C. 7256.	No similar provision.	<i>Sec. 1410.</i> DOE may use other transactions to fund research projects when (1) a standard contract, grant, or cooperative agreement would be infeasible or inappropriate, (2) the research to be supported does not duplicate existing DOE programs, and (3) government funds are half or less of the total funding for the project. These transactions shall be exempt from the patent rights and invention reporting requirements of 42 U.S.C. 5908, and DOE shall not disclose confidential information submitted by non-federal participants or developed as part of a supported project. Guidelines for these transactions must be established.	

Provision	Current Law	House	Senate	Comments
<b>Mobility of scientific and technical personnel.</b>	No existing provision.	<i>Sec. 21807.</i> DOE must prepare a report on disincentives to the transfer of scientific and technical personnel among the contractor-operated national laboratories and single-purpose research facilities.	<i>Sec. 1411.</i> The Technology Transfer Coordinator (established by Sec. 1407) must prepare a report on disincentives to the transfer of scientific and technical personnel among the contractor-operated national laboratories and single-purpose research facilities.	
<b>NAS report on commercial energy technology applications.</b>	No existing provision.	<i>Sec. 21808.</i> DOE shall arrange with NAS to study obstacles to accelerating commercial energy technology applications and technology transfer.	<i>Sec. 1412.</i> NAS must prepare a study on accelerating the cycle of energy technology research, development, and deployment. <i>Sec. 1413.</i> The Technology Partnership Working Group (established by Section 1407) must issue biennial reports on barriers to technology transfer, ways to lower them, and the readiness for technology transfer of technologies developed under the DOE energy efficiency, renewable energy, fossil energy, and nuclear energy programs.	

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Provision	Current Law	House	Senate	Comments
<b>Outreach.</b>	No existing requirement.	<i>Sec. 21809.</i> For each program authorized under this title, the Secretary of Energy is directed to create an outreach component to provide information to stakeholders, including business, industry, consumers, universities, national laboratories and others.	No provision.	
<b>Competitive bidding.</b>	No existing requirement.	<i>Sec. 21810.</i> All management and operating contracts under this title must be bid competitively. The Secretary of Energy may grant a waiver on a case-by-case basis, but must notify Congress two months beforehand.	No provision.	
<b>Reprogramming.</b>	No existing requirement.	<i>Sec. 21811.</i> The Secretary of Energy must report plans for distributing appropriations among the programs authorized under this title. Reprogrammings larger than 5% must also be reported.	No provision.	

Provision	Current Law	House	Senate	Comments
<p><b>Energy research and development programs and construction with other laws.</b></p>	<p>R&amp;D programs are currently funded, but there are no existing goals for reducing energy intensity, curbing energy use, and cutting carbon dioxide emissions.</p>	<p><i>Sec. 21812.</i> The Secretary is directed to carry out the programs under this title in accordance with other statutes that govern the operations of DOE and its programs.</p>	<p><i>Sec. 1201-1204.</i> A DOE energy R&amp;D and deployment program is charged with the goals of reducing energy intensity by 1.9% annually through 2020, reducing total energy use by 8 quadrillion Btu by 2020, and reducing carbon dioxide by 166 million metric tons by 2020.</p>	
<p><b>University collaboration.</b></p>	<p>No existing requirement.</p>	<p><i>Sec. 21813.</i> The Secretary of Energy is directed to report on the feasibility of promoting collaboration among large and small colleges through grants, contracts, and cooperative agreements on energy projects. The Secretary is also to consider incentives for small colleges.</p>	<p><i>Sec. 1505.</i> DOE education programs must give priority to activities that encourage women and minorities to pursue scientific and technical careers. DOE national laboratories (and other DOE science facilities if so directed by the Secretary) must increase the participation of historically black colleges and universities, Hispanic-serving institutions, and tribal colleges in activities such as research, equipment transfer, training, and mentoring. DOE is to report on activities under this section within two years.</p>	

Provision	Current Law	House	Senate	Comments
<b>Federal laboratory educational partners.</b>	The Stevenson-Wydler Technology Innovation Act (P.L. 96-480, as amended) requires that royalties be retained by the laboratory that produced the invention and that cooperative R&D agreements be consistent with the missions and objectives of the agencies involved. There is no existing requirement that the royalties be available for educational assistance. Also, there is no requirement that all laboratories consider DOE missions and objectives.	<i>Sec. 21814.</i> The Stevenson-Wydler Technology Innovation Act is amended to require that royalties from all federal agencies distributed for R&D at all national laboratories also be available for educational assistance consistent with DOE missions and objectives. Also, the Act is broadened to require that all cooperative R&D agreements involving federal agencies and national laboratories must consider educational assistance consistent with DOE missions and objectives.	No provision.	
<b>DOE-NASA cooperation.</b>	No existing requirement.	<i>Sec. 21815.</i> The Secretary of Energy is directed to form an interagency agreement with the National Aeronautics and Space Administration (NASA) to make NASA's energy expertise more available to DOE programs. The covered technologies shall include solar, wind, fuel cells, and hydrogen storage and distribution.	No provision.	

**Department of Energy Management**

<b>Provision</b>	<b>Current Law</b>	<b>House</b>	<b>Senate</b>	<b>Comments</b>
<b>External regulation of Department of Energy.</b>	DOE regulates nuclear safety at its facilities, with oversight of defense-related facilities by the Defense Nuclear Facilities Safety Board (AEA, Chapter 21).	<i>Sec. 22001.</i> DOE shall prepare a report on external regulation of its non-defense facilities. The report shall study the transfer of nuclear safety regulation for such facilities to the Nuclear Regulatory Commission and worker safety and health regulation to the Occupational Safety and Health Administration.	No provision.	

Provision	Current Law	House	Senate	Comments
<p><b>Improved coordination and management of civilian science and technology programs.</b></p>	<p>DOE's administrative structure is governed by the Department of Energy Organization Act (42 U.S.C. 7132).</p>	<p><i>Sec. 22002.</i> The DOE Organization Act is amended to designate an Assistant Secretary to head the Office of Science. Also, certain technical and conforming amendments are made.</p>	<p><i>Sec. 1406.</i> The new position of DOE Under Secretary for Energy and Science is established, with authority over the assistant secretaries responsible for energy R&amp;D, energy technology, and science, and also to serve as science and technology advisor to the Secretary. The Director of the Office of Science shall become an assistant secretary, while certain advisory responsibilities are transferred to the new under secretary. An additional assistant secretary position is created, and it is the sense of the Senate that leadership for DOE missions in nuclear energy should be at the assistant secretary level.</p>	

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Provision	Current Law	House	Senate	Comments
<b>Report on equal employment opportunity practices.</b>	No existing requirement.	<i>Sec. 22003.</i> The Secretary of Energy is required to produce a biennial report on equal employment opportunities that includes a review of the outreach efforts by each national laboratory's contractor to attract women and minorities, and a summary of laboratory collaboration with the Office of Federal Contract Compliance Programs.	No provision.	
<b>Sense of Congress on procurement controls.</b>	No specific provision.	<i>Sec. 22004.</i> The Secretary of Energy is directed to implement more stringent procurement and inventory controls, including the purchase card program, to prevent waste, fraud, and abuse.	No provision.	

## Clean School Buses

Provision	Current Law	House	Senate	Comments
<p><b>Grants for purchasing alternative fuel school buses.</b></p>	<p>No provision.</p>	<p><i>Sec. 23001.</i> A pilot program is established by DOE to provide grants to local governments and contractors that provide school bus service for public school systems. Grants are provided to aid in the purchase of alternative fuel and advanced diesel buses, and the infrastructure necessary to support them.</p>	<p><i>Sec. 814.</i> Similar to the House provision, except that the program is jointly administered by DOE and the Department of Transportation.</p>	
<p><b>Fuel cell bus development and demonstration program.</b></p>	<p>No provision.</p>	<p><i>Sec. 23002.</i> A pilot program is established for the development and demonstration of fuel cell school buses.</p>	<p><i>Sec. 815.</i> Substantially similar to the House provision.</p>	<p>Programs under the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21, P.L. 105-178) provide funding for demonstration of fuel cell buses, mainly for transit purposes.</p>

Provision	Current Law	House	Senate	Comments
<b>Hybrid electric and fuel cell vehicles.</b>	No provision.	See <i>Sec. 23002</i> and <i>Sec. 15033</i> .	<i>Sec. 807.</i> Appropriations of \$225 million to DOE are authorized for FY2003 to expand R&D for advanced technologies to improve the cleanliness of automobiles. Emphasis is placed on (1) fuel cells, including high temperature membranes for fuel cells and fuel cell auxiliary power systems; (2) hydrogen storage; (3) advanced vehicle engine and emission control systems; (4) advanced batteries and power electronics for hybrid vehicles; (5) advanced fuels; and (6) advanced materials.	
<b>Fuel cell demonstration.</b>	No current law.	See <i>Sec. 23002</i> .	<i>Sec. 809.</i> The Secretaries of Energy and Defense are to jointly carry out a program to accelerate use of fuel cell technology in military and non-military uses. Technologies developed in the Partnership for a New Generation of Vehicles and Freedom Car programs are specifically targeted.	

Provision	Current Law	House	Senate	Comments
<b>Bus replacement.</b>	Sec. 5111 of the Transportation Equity Act for the 21 <sup>st</sup> Century (TEA-21, P.L. 105-178) established the Advanced Vehicle Technologies Program (AVP), which promotes advanced technology development through contracts, grants, and cooperative agreements.	<i>Sec. 23002.</i> A pilot program is established for the development and demonstration of fuel cell school buses. [also see <i>Sec. 15033</i> ]	<i>Sec. 810.</i> The Secretary of Transportation is required to carry out a study to determine how best to replace diesel-fueled buses with buses that are hybrids, or buses that use fuel cells or cleaner burning alternative and renewable fuels.	While TEA-21 authorized a total of \$250 million over five years, only \$10 million total was appropriated in FY1999 and FY2000. Congress has not appropriated funds for AVP since FY2000.
<b>Diesel retrofit program.</b>	No provision.	<i>Sec. 23003.</i> A pilot program is established to provide grants for the development and application of retrofit technologies for diesel school buses.	No similar provision.	
<b>Authorization of appropriations.</b>	No provision.	<i>Sec. 23004.</i> A total of \$300 million is authorized for FY2004 through FY2006, for projects under Secs. 23001 and 23002. However, no more than a total of \$25 million may be used for Sec. 23002. Such sums as necessary are authorized for Sec. 23003.	<i>Sec. 816.</i> A total of \$210 million is authorized for FY2004 through FY2006 for projects under sections 814 and 815. There is a similar \$25 million limitation on spending for fuel cell buses (Sec. 815).	

## Resources

### Indian Energy

Provision	Current Law	House	Senate	Comments
<b>Indian energy.</b>	Grants and low-interest loans are authorized for energy projects on Indian reservations under Title XXVI of the Energy Policy Act of 1992 (25 U.S.C. 3501 et seq.).	<p><i>Sec. 30101.</i> Procedures are outlined whereby an Indian tribe may “enter into a lease or business agreement for the purpose of energy development” and “grant right-of-way over the Indian land of the Indian tribe for a pipeline or electric transmission or distribution line without specific approval by the Secretary” of the Interior.</p> <p>Grants and low-interest loans for the development of tribal energy resources are eliminated.</p>	No similar provision	

Provision	Current Law	House	Senate	Comments
<b>Comprehensive Indian energy program.</b>	No provision.	No provision.	<i>Sec. 401.</i> A comprehensive Indian energy program at the DOE is established to assist tribes in meeting their energy needs and expanding opportunities to develop energy resources on tribal lands. A grant program and a loan guarantee program for Indian energy development are established. Federal agencies may give a preference to purchasing Indian energy.	
<b>Office of Indian Energy Policy and Programs.</b>	No provision.	No provision.	<i>Secs. 402-403.</i> Within the DOE, an Office of Indian Energy Policy and Programs is created to administer the programs from the previous section, 401. Appropriations are authorized.	
<b>Siting energy facilities on tribal lands.</b>	No provision.	No provision.	<i>Sec. 404.</i> Indian tribes may directly lease land and rights-of-way for energy facilities, without case-by-case review by the Secretary of the Interior, if the tribe develops, and the Secretary approves, tribal regulations, and the term of the lease does not exceed 30 years.	

CRS-140

Provision	Current Law	House	Senate	Comments
<b>Indian mineral development act review.</b>	No provision.	No provision.	<i>Sec. 405.</i> The Secretary of the Interior is required to undertake a review and make recommendations regarding tribal opportunities under the Indian Mineral Development Act.	
<b>Renewable energy study.</b>	No provision.	No provision.	<i>Sec. 406.</i> The Secretary of Energy is required to report on energy consumption and renewable energy development potential on Indian land, including identification of barriers to the development of renewable energy on tribal land.	
<b>Federal Power Marketing Administrations.</b>	No provision.	No provision.	<i>Sec. 407.</i> The Bonneville Power Administration and Western Area Power Administration are authorized to assist in developing distribution systems that provide power to Indian tribes using the federal transmission system.	

Provision	Current Law	House	Senate	Comments
<b>Feasibility study of combined wind and hydropower demonstration project.</b>	None.	No provision.	<i>Sec. 408.</i> DOE, in conjunction with the Army and the Interior Department, is to study the feasibility of obtaining a marketable, firm electricity source from wind energy generated on tribal lands connected with hydropower generated by the U.S. Army Corp of Engineers at the Missouri River powerplants.	

## Oil and Gas

Provision	Current Law	House	Senate	Comments
<b>Program on oil and gas royalties-in-kind.</b>	Royalty-in-kind authority is provided by the Outer Continental Shelf Lands Act of 1953, as amended (43 U.S.C. 1331, et seq.).	<i>Sec. 30201.</i> When the federal government sells any physical quantity of oil and gas received as royalty-in-kind payments, it must sell it for market value and must receive revenues greater than or equal to those received under a comparable cash payment royalty.	No comparable provision.	
<b>Clarification of fair market rental value determinations for public lands and Forest Service rights-of-way.</b>	The Mineral Leasing Act of 1920, as amended, governs the development of oil and gas on public lands (30 U.S.C 181 et seq.).	<i>Sec. 30202.</i> The Secretary of the Interior and the Secretary of Agriculture shall revise and update annually rental fees for land encumbered by a linear right-of-way to reflect fair market value.	No provision.	

CRS-142

Provision	Current Law	House	Senate	Comments
<p><b>USGS estimates of oil and gas resources underlying onshore federal lands.</b></p>	<p>The Mineral Leasing Act of 1920, as amended, provides the authority for onshore federal lands to be leased for development.</p>	<p><i>Sec. 30203.</i> The U.S. Geological Survey (USGS) shall identify restrictions and impediments relevant to onshore oil and gas development and also report the amount of the resource that otherwise would have been produced.</p>	<p><i>Sec. 602.</i> The Secretary of the Interior shall ensure timely action on applications for oil and gas leases and drilling permits on federal lands.</p>	
<p><b>Royalty incentives for certain offshore areas.</b></p>	<p>The Outer Continental Shelf Lands Act (OCSLA, 43 U.S.C. 1331) provides the authority for oil and gas leasing and development offshore. The Deepwater Royalty Relief Act of 1996 specifies how deepwater royalty relief is granted.</p>	<p><i>Sec. 30204.</i> Royalty relief would be provided for shallow water deep gas production at certain depths and for deepwater areas at fixed production levels at certain depths.</p>	<p>No provision.</p>	
<p><b>Marginal property production incentives.</b></p>	<p>No specific provision.</p>	<p><i>Sec. 30205.</i> The Secretary of the Interior may reduce or terminate royalties for independent oil and gas producers under certain conditions.</p>	<p>No provision.</p>	

Provision	Current Law	House	Senate	Comments
<b>Federal onshore oil and gas leasing and permitting practices.</b>	No provision.	<i>Sec. 30206.</i> The Secretaries of the Interior and Agriculture shall evaluate the oil and gas leasing and permitting process with particular emphasis on time frames for the permit process. The Secretaries shall report their findings to House and Senate committees.	<i>Sec. 602.</i> The Secretary of the Interior shall ensure timely action on applications for oil and gas leases and drilling permits on federal lands.	
<b>Management of federal oil and gas leasing programs.</b>	No specific provision.	<i>Sec. 30207.</i> Best management practices shall be employed in the onshore oil and gas leasing program to ensure timely development of resources.	<i>Sec. 602.</i> The Secretary of the Interior shall ensure timely action on applications for oil and gas leases and drilling permits on federal lands.	
<b>Consultation regarding oil and gas leasing on public lands.</b>	None.	<i>Sec. 30208.</i> A memorandum of understanding (MOU) between the Secretary of the Interior and the Secretary of Agriculture shall include provisions to ensure timely action on oil and gas leases for development and coordinated management.	<i>Sec. 602.</i> The Secretary of the Interior shall ensure timely action on applications for oil and gas leases and drilling permits on federal lands.	
<b>Oil and gas lease acreage limitations.</b>	Section 27(d)(1) of the Mineral Leasing Act establishes acreage limits on leaseholdings within a single state (30 U.S.C. 184 (d)(1)).	<i>Sec. 30209.</i> Single-state leasing limitations shall not include acreage committed to a federally approved unit or cooperative plan or communitization agreement.	<i>Secs. 603.</i> Lease acreage limitations are altered.	

CRS-144

Provision	Current Law	House	Senate	Comments
<b>Federal reimbursement for orphan well reclamation.</b>	No specific provision.	<i>Sec. 30210.</i> The Secretary of the Interior shall establish a program that ensures the reclamation of orphaned wells on federal lands.	<i>Sec. 604.</i> The Secretary of the Interior, in cooperation with the Secretary of Agriculture, shall establish a program that ensures the remediation of orphaned wells on federal land.	
<b>Preservation of geological and geophysical data.</b>	None.	<i>Sec. 30211.</i> The Secretary of the Interior shall establish a Data Archive System including subsurface data from federal lands, a national catalog, an advisory committee, and financial assistance to participating states. \$30 million would be authorized for FY2004-FY2008.	No provision.	
<b>Compliance with Executive Order No. 13211; actions concerning regulations that significantly affect energy supply, distribution, or use.</b>	None.	<i>Sec. 30212.</i> Before any person takes any action that could have a significant adverse effect on the supply of domestic energy resources from federal public lands, the person shall comply with Executive Order No. 13211, requiring preparation of a “Statement of Energy Effects.”	No provision.	

CRS-145

Provision	Current Law	House	Senate	Comments
<b>Reimbursement for costs of NEPA analyses, documentation, and studies.</b>	No provision.	<i>Sec. 30213.</i> The Mineral Leasing Act (30 U.S.C. et. seq.) is amended to provide reimbursement for costs for NEPA-related studies under certain circumstances.	No provision.	
<b>Alternate energy-related uses on the Outer Continental Shelf (OCS).</b>	No provision.	<i>Sec. 30214.</i> The Secretary of the Interior may grant easements or rights-of-way on the outer continental shelf (OCS) for energy-related activity on a competitive or noncompetitive basis and may charge fees for such access. A surety bond or other financial guarantee is required.	No provision.	
<b>Appeals of consistency determinations under the Coastal Zone Management Act of 1972.</b>	The Secretary of the Interior shall publish notice to indicate when an appeal of a consistency determination has been closed under Section 319 of the Coastal Zone Management Act of 1972 (CZMA, 16 U.S.C. 1465).	<i>Sec. 30215.</i> Time limits are established for appeals of CZMA consistency determinations.	No provision.	
<b>Task force on energy project streamlining.</b>	No provision.	<i>Sec. 30216.</i> It is the sense of Congress that the task force set up by Executive order 13212 to review and expedite the permitting process for energy projects should remain in place until its objectives are met.	No provision.	

CRS-146

Provision	Current Law	House	Senate	Comments
<b>Pilot program on Northern Rocky Mountains energy resource management.</b>	No provision.	<i>Sec. 30217.</i> “The Sense of the Congress” is to carry out the pilot project included in Executive Order 13212 in the Northern Rocky Mountains in order to improve management of the region’s energy resources.	No provision.	
<b>Energy development facilitator study.</b>	No provision.	<i>Sec. 30218.</i> The Council on Environmental Quality shall report on the feasibility of establishing the position of Facilitator for Energy Development.	No provision.	
<b>Combined hydrocarbon leasing.</b>	Lands within a special tar sands area shall be leased under general competitive bidding regulations (Mineral Leasing Act of 1920, 30 U.S.C. 226 (b)(2), Section 17 (b)(2)).	<i>Sec. 30219.</i> The Mineral Leasing Act is amended to allow separate leases for tar sands and for oil and gas in the same area.	No provision.	
<b>Royalty payments under leases under the Outer Continental Shelf Lands Act.</b>	Compensation is provided to the state of Louisiana and its lessees for net drainage of oil and gas resources (OCS Lands Act of 1953 as amended, 43 U.S.C. 1334, section 5 (j)).	<i>Sec. 30220.</i> The lessee of a “covered lease tract” may withhold royalties due to the United States if it pays the State of Louisiana 44 cents for every dollar of the federal royalty withheld. This royalty relief ends when certain drainage claims are satisfied.	No provision.	A covered lease tract is a tract or portion of a tract (A) lying seaward of the zone defined and governed by section 8(g) of the OCSLA (43 U.S.C. 1337(g)) or (B) lying within such zone but to which such section does not apply.

Provision	Current Law	House	Senate	Comments
<b>Federal technical assistance for abandoned oil and gas wells.</b>	Mineral Leasing Act of 1920.	No provision.	<i>Sec. 605.</i> The Secretary of Energy shall establish a technical assistance program to help states quantify and mitigate risks from abandoned wells.	
<b>Offshore oil and gas suspensions.</b>	Outer Continental Shelf Lands Act (43 U.S.C. 1334).	No provision.	<i>Sec. 606.</i> The Minerals Management Service (MMS) can suspend offshore oil and gas operations to reevaluate geological data if the suspension would prevent waste from unnecessary well drilling.	
<b>Coalbed methane study.</b>	Coalbed methane R&D is carried out by the DOE and funded through the Interior and Related Agencies Appropriation Bill.	No provision.	<i>Sec. 607.</i> The Secretary of the Interior and others shall study the effects of coalbed methane production on water resources.	
<b>Oil and gas production royalty and tax policy evaluation.</b>	Mineral Leasing Act of 1920.	No provision.	<i>Sec. 608.</i> The Secretary of Energy and others must evaluate the effect of oil and gas royalty and tax policies on oil and gas production.	

Provision	Current Law	House	Senate	Comments
<b>Coal leasing in the Powder River Basin.</b>	Coal is currently being leased on federal lands under the Mineral Leasing Act of 1920 (30 U.S.C.181).	No provision.	<i>Sec. 613.</i> The Secretary of the Interior shall report to Congress on plans to resolve conflicts between development of coal and coalbed methane in the Powder River Basin.	The Bureau of Land Management can issue development leases for two different resources on the same tract of land. The potential for conflict arises from overlapping coal and gas leases in the Powder River Basin.

## Biomass Energy

Provision	Current Law	House	Senate	Comments
<p><b>Grants to improve the commercial value of forest biomass for electric energy, useful heat, transportation fuels, petroleum-based product substitutes, and other commercial purposes.</b></p>	No existing provision.	<p><i>Sec. 30301.</i> DOE is empowered to make grants of up to \$20 per green ton (a ton of freshly sawed or undried wood) to individuals, businesses, communities, and Indian tribes for the commercial use of biomass for fuel, heat, or electric power. Also, DOE is empowered to make grants as an incentive to projects that develop ways to improve the use of, or add value to, biomass. Preference is given to small towns, rural areas, and areas at risk of damage to the biomass resource. DOE is authorized \$50 million over 10 years for this section.</p>	No provision.	

## Arctic Coastal Plain Domestic Energy

Provision	Current Law	House	Senate	Comments
<p><b>Short title.</b></p>	None.	<p><i>Sec. 30401.</i> Arctic Coastal Plain Domestic Energy Security Act of 2003.</p>	No provision.	

CRS-150

Provision	Current Law	House	Senate	Comments
<p><b>Definitions.</b></p>	<p>The coastal plain of the Arctic National Wildlife Refuge (ANWR) is defined as an area on a specific map by the Alaska National Interest Lands Conservation Act of 1980 (ANILCA Sec. 1002, 16 U.S.C. 3142(b)(1)).</p>	<p><i>Sec. 30402.</i> The ANWR coastal plain comprises about 1.5 million acres as described in Appendix I to Part 37 of Title 50 CFR.</p>	<p>No provision.</p>	<p>The House definition identifies the same area as current law.</p>
<p><b>Leasing program for lands within the Coastal Plain.</b></p>	<p>Oil and gas leasing in the Arctic National Wildlife Refuge (ANWR) is prohibited under provisions of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA Sec. 1003, 16 U.S.C. 3143).</p>	<p><i>Sec. 30403.</i> Section 1003 of ANILCA is repealed, and the Secretary of the Interior is required to implement a competitive oil and gas leasing program for the ANWR Coastal Plain. The 1987 “Final Legislative Environmental Impact Statement” is deemed to satisfy the National Environmental Policy Act of 1969 with respect to establishing the leasing program. With regard to other NEPA requirements, a new study is called for, limited to identification of one preferred action and one other drilling option. The Secretary may exclude any special area up to a specified limit from leasing or surface occupancy, although horizontal drilling access is permitted.</p>	<p>No provision.</p>	

CRS-151

Provision	Current Law	House	Senate	Comments
<b>Lease sales.</b>	Current oil and gas leases are held under the Mineral Leasing Act of 1920, as amended.	<i>Sec. 30404.</i> The Secretary of the Interior is directed to offer to qualified bidders not less than 200,000 acres in the first lease sale, which is to take place within 22 months of enactment. Additional sales may be made if interest exists.	No provision.	If other requirements – such as NEPA reviews and winter pre-leasing exploration – cannot be completed in this time, the consequences are not specified.
<b>Grant of leases by the Secretary.</b>	The Mineral Leasing Act of 1920 established lease terms and conditions on public lands in general, but leasing in ANWR is prohibited under ALILCA.	<i>Sec. 30405.</i> The Secretary of the Interior may grant leases to the highest qualified bidder.	No provision.	
<b>Lease terms and conditions.</b>	Leasing is prohibited under ANILCA.	<i>Sec. 30406.</i> A royalty rate of 12.5% in-value or in-kind is assessed on production. As with other federal oil and gas leases, lessees are responsible for the reclamation of disturbed lands in the Coastal Plain to their prior use or to a higher or better use as approved by the Secretary of the Interior. A fair share of development work must go to Alaskans, similar to the Trans-Alaska Pipeline. Lessees will be required to negotiate a project labor agreement. Export of ANWR oil is prohibited.	No provision.	

CRS-152

Provision	Current Law	House	Senate	Comments
<b>Coastal Plain environmental protection.</b>	The Mineral Leasing Act includes provisions that address surface disturbance for leasing elsewhere; ANILCA addresses surface disturbance for exploration activities in ANWR.	<i>Sec. 30407.</i> Under a “no significant adverse effect standard” the Secretary of the Interior shall ensure that, consistent with Sec. 30403: the maximum amount of surface area used for production and support facilities is not more than 2,000 acres; there is no significant adverse affect on fish and wildlife; and the best available technology is used for development. The lessees must comply with all relevant state and federal laws, and site-specific assessments may also be carried out.	No provision.	Sec. 30403 requires the Secretary to administer lease terms and conditions in a manner that ensures the receipt of “fair market value” for ANWR oil and gas resources.
<b>Expedited judicial review.</b>	No specific provision.	<i>Sec. 30408.</i> Requests for judicial review must be filed within 90 days of the action being challenged (with certain exceptions) and are limited to whether the Secretary of the Interior has complied with terms of this title.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Federal and state distribution of revenues.</b>	Distribution of revenues is established under the Mineral Leasing Act of 1920; Alaska receives 90%.	<i>Sec. 30409.</i> Alaska shall receive semiannual payments of 50% of the revenues (royalties, bonus bids, rents ) received from oil and gas leasing activity under this title. Bonus payments are authorized to be appropriated to the Low Income Home Energy Assistance Program.	No provision.	
<b>Rights-of-way across the Coastal Plain.</b>	ANILCA.	<i>Sec. 30410.</i> The Secretary of the Interior shall ensure that rights of way and easements for transporting oil and gas have no significant adverse impact on the Coastal Plain, fish, wildlife, or their habitat.	No provision.	As noted above, Sec. 30403 requires the Secretary to administer lease terms and conditions in a manner that ensures the receipt of “fair market value” for ANWR oil and gas resources.
<b>Native lands: conveyance and regulation</b>	Sec. 22(g) of the Alaska Native Claims Settlement Act (P.L. 92-203) makes native surface lands within ANWR subject to regulations of the Refuge, and therefore precludes energy development. Subsurface resources on land owned by the Arctic Slope Regional Corporation (ASRC) are governed by the terms of a 1983 contract.	<i>Sec. 30411.</i> The Secretary of the Interior shall convey certain additional surface rights to the Kaktovik Inupiat Corporation and certain subsurface rights to the Arctic Slope Regional Corporation.	No provision.	By opening the coastal plain to development, the House bill opens more than 100,000 acres of native lands in the coastal plain to development. The House bill does not specify if native lands are subject to the bill’s acreage limitation or to environmental restrictions on federal lands. The contract with ASRC, with different environmental provisions, appears to pertain.

CRS-154

Provision	Current Law	House	Senate	Comments
<b>Local government impact aid and community service assistance.</b>	None.	<i>Sec. 30412.</i> The Secretary of the Interior may use funds from the Coastal Plain Local Government Impact Aid Assistance Fund for financial assistance to eligible entities as a result of oil and gas exploration and development in the Coastal Plain.	No provision.	

**Hydropower**

Provision	Current Law	House	Senate	Comments
<b>Study and report on increasing electric power production capability of existing facilities.</b>	No provision.	<i>Sec. 30501.</i> Within 12 months of enactment, the Secretary of the Interior will submit a study that describes existing and potential capacity at hydropower facilities under Interior Department jurisdiction. In addition, the study must identify costs and benefits of producing additional hydropower from each facility. The study shall describe the impact that increased hydroelectric production would have on irrigation, fish, wildlife, Indian tribes, river health, water quality, navigation, recreation, fishing, and flood control.	No provision.	

CRS-155

Provision	Current Law	House	Senate	Comments
<p><b>Study and implementation of increased operational efficiencies in hydroelectric power projects.</b></p>	<p>No provision.</p>	<p><i>Sec. 30502.</i> Within 18 months of enactment, the Secretary of the Interior will submit a study of all hydropower plants under Interior’s administrative jurisdiction that have greater than 50 MW of capacity. This study will describe whether existing plants are operated to maximize efficiency and will identify measures that could improve such optimization. It will also describe the impact of optimized hydroelectric power production on irrigation, fish, wildlife, Indian tribes, river health, water quality, navigation, recreation, fishing, and flood control. The Secretary shall also work with the Administrator of each federal power marketing administration to determine how the value of hydropower can be optimized.</p>	<p>No provision.</p>	

CRS-156

Provision	Current Law	House	Senate	Comments
<b>Shift of project loads to off-peak periods.</b>	No provision.	<i>Sec. 30503.</i> The Secretary of the Interior shall, with the consent of affected irrigation customers, study and adjust water pumping schedules at Bureau of Reclamation facilities to reduce power consumption during periods of peak electric power consumption. This section does not affect the Department of the Interior's existing obligations to provide electric power, water, or other benefits.	No provision.	

**Geothermal Energy**

Provision	Current Law	House	Senate	Comments
<b>Competitive lease sale requirements.</b>	The type of geothermal lease procedure is based on whether lands are within a known geothermal resource area (Geothermal Steam Act of 1970, 30 U.S.C. 1003).	<i>Sec. 30601.</i> Lease procedures for competitive and noncompetitive lease sales are amended. Competitive lease sales are held every two years. If no competitive bid is made, then lands are available for two years under a noncompetitive process.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Special provisions regarding direct use of low temperature geothermal energy resources.</b>	Geothermal energy production on federal lands is charged a royalty of 10%-15% under section 5 of the Geothermal Steam Act (30 U.S.C. 1004).	<i>Sec. 30602.</i> A fee schedule in lieu of any royalty or rental payments is established for low temperature geothermal resources. Existing geothermal leases may be converted to leases for direct utilization of low temperature geothermal resources.	No provision.	
<b>Royalties and near-term production incentives.</b>	A royalty between 10% and 15% is imposed on the amount or value of steam or other form of heat derived from production under a geothermal lease (section 5 of the Geothermal Steam Act of 1970, 30 U.S.C. 1004).	<i>Sec. 30603.</i> Royalties from geothermal leases shall be 3.5% of the gross proceeds from geothermal electricity sales and 0.75% of the gross proceeds from the sale of items produced from direct use of geothermal energy. Royalties on new or expanded geothermal production are reduced by half for six years after enactment. One hundred percent of the federal royalties from a qualified lease are to be transferred to the state.	No provision.	

CRS-158

Provision	Current Law	House	Senate	Comments
<b>Consultation regarding geothermal leasing and permitting on public lands.</b>	No specific provision.	<i>Sec. 30604.</i> An MOU between the Secretaries of the Interior and Agriculture should include provisions that will identify known geothermal areas on public lands within the National Forest System and establish an administrative procedure that will include time frames for processing.	No provision.	
<b>Review and report to Congress.</b>	The Secretary of the Interior can withdraw public lands from leasing or other public use and modify, extend, or revoke withdrawals under provisions of the Federal Land Policy and Management Act of 1976 (FLPMA, 43 U.S.C. 1714).	<i>Sec. 30605.</i> The Secretary of the Interior shall review all areas under moratoria and withdrawal and report to Congress on whether the reasons for the withdrawals still apply.	No provision.	
<b>Reimbursement for costs of NEPA analyses, documentation, and studies.</b>	None.	<i>Sec. 30606.</i> Under certain conditions the Secretary of the Interior may reimburse through royalty credits the cost of a study or documentation required under NEPA.	No provision.	
<b>Assessment of geothermal energy potential.</b>	No specific provision.	<i>Sec. 30607.</i> The USGS shall provide the U.S. Congress with an updated assessment of geothermal resources.	No provision.	

CRS-159

Provision	Current Law	House	Senate	Comments
<b>Cooperative or unit plans.</b>	No specific provision.	<i>Sec. 30608.</i> The Geothermal Steam Act of 1970 (30 U.S.C. 1001 et seq.) is amended to facilitate cooperative or unit plans for development.	No provision.	
<b>Royalty on byproducts.</b>	No specific provision.	<i>Sec. 30609.</i> Leasable minerals produced as a byproduct of a geothermal lease shall pay royalties under the Mineral Leasing Act (30 U.S.C. 181).	No provision.	
<b>Repeal of authorities of Secretary to readjust terms, conditions, rentals, and royalties.</b>	The Secretary of the Interior may readjust terms and conditions of a geothermal lease at certain intervals, including rental and royalty rates (Geothermal Steam Act of 1970, 30 U.S.C. 1007).	<i>Sec. 30610.</i> Sections 8(a) and (b) of the Geothermal Steam Act are repealed, related to adjusting lease conditions.	No provision.	
<b>Crediting of rental toward royalty.</b>	Annual rental fees of not less than \$1 per acre on geothermal leases are paid in advance (Geothermal Steam Act of 1970, 30 U.S.C. 1004).	<i>Sec. 30611</i> Annual rental revenue paid on a geothermal lease shall be credited towards the royalty on that same lease.	No provision.	
<b>Lease duration and work commitment requirements.</b>	The primary lease term for a geothermal lease is 10 years and shall continue as long as geothermal steam is produced or used in commercial quantities (Geothermal Steam Act of 1970, 30 U.S.C. 1005).	<i>Sec. 30612.</i> The primary term of a geothermal lease is ten years but may be extended for two additional five-year periods if work commitments are satisfied.	No provision.	

CRS-160

Provision	Current Law	House	Senate	Comments
<b>Advanced royalties required for suspension of production.</b>	No specific provision.	<i>Sec. 30613.</i> If production from a geothermal lease is suspended during a period in which royalties are required, then royalties must be paid in advance until production resumes.	No provision.	
<b>Annual rental.</b>	Rents are \$1 per acre or fraction thereof for each year of a geothermal lease (Geothermal Steam Act of 1970, 30 U.S.C. 1004).	<i>Sec. 30614.</i> Rental rates for noncompetitive and competitive geothermal lease sales are established.	No provision.	

**Coal**

Provision	Current Law	House	Senate	Comments
<b>Short title.</b>	No provision.	<i>Sec. 30701.</i> This title may be cited as the Coal Leasing Amendments Act of 2003.	No provision.	
<b>Repeal of the 160-acre limitation for coal leases.</b>	Modifications to an existing coal lease shall not exceed 160 acres or add acreage larger than that in the original lease (Mineral Leasing Act of 1920, 30 U.S.C. 203).	<i>Sec. 30702.</i> The 160-acre limitation on coal lease modifications is repealed.	No provision.	
<b>Mining plans.</b>	No provision.	<i>Sec. 30703.</i> Criteria are established for extending the mine-out period of a coal lease beyond 40 years.	No provision.	

CRS-161

Provision	Current Law	House	Senate	Comments
<p><b>Payment of advance royalties under coal leases.</b></p>	<p>Coal leases are subject to diligent development requirements, but the Secretary of the Interior may suspend the condition of continued operation upon payment of advance royalties (Mineral Leasing Act of 1920, 30 U.S.C. 207 (b)). Advanced royalties are computed on a fixed production to reserve ratio and the aggregate number of years advanced royalties may be accepted in lieu of production shall not exceed 10.</p>	<p><i>Sec. 30704.</i> The Secretary of the Interior may, upon the payment of advance royalties, suspend a coal lease’s requirement for continuous operation. Advanced royalties shall be based on the average price for coal sold in the spot market from the same region and the aggregate number of years advanced royalties may be accepted in lieu of production shall not exceed 20.</p>	<p>No provision.</p>	
<p><b>Elimination of deadline for submission of coal lease operation and reclamation plan.</b></p>	<p>An operation and reclamation plan must be submitted within three years after a lease is issued under the Mineral Leasing Act of 1920 (30 U.S.C. 207(c)).</p>	<p><i>Sec. 30705.</i> The three-year deadline is eliminated.</p>	<p>No provision.</p>	
<p><b>Financial assurances with respect to bonus bids.</b></p>	<p>Financial assurance is required to guarantee payment of bonus bid installments (Mineral Leasing Act of 1920, 30 U.S.C. 201(a)).</p>	<p><i>Sec. 30706.</i> A financial surety bond to cover deferred bonus bid payments shall not be required.</p>	<p>No provision.</p>	

CRS-162

Provision	Current Law	House	Senate	Comments
<b>Inventory requirement.</b>	No provision.	<i>Sec. 30707.</i> The Secretary of the Interior, in consultation with the Secretaries of Agriculture and Energy, shall assess coal on public lands, including low-sulfur coal, and various impediments to developing such resources.	No provision.	
<b>Application of amendments.</b>	No provision.	<i>Sec. 30708.</i> Amendments made by this title apply to any coal lease issued before, on, or after the date of the enactment of this act.	No provision.	
<b>Federal mine inspectors</b>	The Secretary of Labor uses the Mine Safety and Health Administration (MSHA, 29 U.S.C. 557) to carry out the Mine Safety and Health Act of 1977, (30 U.S.C. 801).	No provision.	<i>Sec. 1507.</i> To maintain a sufficient number of qualified mine inspectors, the Department Labor shall hire and train new mine inspectors.	

## Insular Areas Energy Security

Provision	Current Law	House	Senate	Comments
<p><b>Insular areas energy security.</b></p>	<p>Comprehensive energy plans for insular areas are required to detail the potential for renewable energy resources (94 Stat. 3480-3481).</p>	<p><i>Sec. 30801.</i> Congress finds that electric power transmission and distribution lines in insular areas are not adequate to withstand hurricane and typhoon damage, and identifies a need to assess energy production, consumption, infrastructure, reliance on imported energy, and indigenous sources of energy in insular areas. The Secretary of the Interior, in consultation with the Secretary of Energy, is required to update insular area plans to reflect these findings. \$5 million is authorized to be appropriated, in part, for matching grants for projects designed to protect electric power transmission distribution lines in one or more of the territories of the United States from damage caused by hurricanes and typhoons.</p>	<p><i>Sec. 1702.</i> DOE must begin a study within 60 days of enactment that will assess the short- and long-term threats to the economy of Hawaii posed by insecure supply and volatile prices. Not later than 300 days after the date of enactment of this section, the Secretary of Energy shall submit to Congress a report detailing the Secretary's findings, conclusions, and recommendations.</p> <p><i>Sec. 1704.</i> Insular areas are directed to reassess energy production, use, infrastructure, resources, and long-term energy plans.</p>	

**Miscellaneous Provisions**

Provision	Current Law	House	Senate	Comments
<p><b>Report on energy facility rights-of-way and corridors on federal lands (continued in next row).</b></p>	<p>No current law.</p>	<p><i>Sec. 30901.</i> Not later than 1 year after enactment, the Secretaries of Agriculture and the Interior, in consultation with the Secretaries of Commerce, Defense, and Energy, and FERC, shall submit to Congress a report that addresses the location of existing rights-of-way on federal lands for oil and gas pipelines and electric transmission and distribution facilities. In addition, the report will describe potential additional capacity within the rights-of-way and corridors. The report will also include a plan to disseminate, upon request, Geographic Information System-based information regarding the rights-of-way. (Continued in next row.)</p>	<p><i>Sec. 6101.</i> Each federal agency must review energy transport rights-of-way under its jurisdiction and report to the Secretary of Energy and to FERC on whether the right-of-way can support new or additional capacity and what changes might be called for to accommodate additional capacity. In performing the review, agency heads should consult with affected states and other stakeholders and consider safety issues involved in such expansions.</p>	

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Provision	Current Law	House	Senate	Comments
<p><b>Report on energy facility rights-of-way and corridors on Federal lands (continued from row above).</b></p>		<p><i>Sec. 30901</i> (continued from row above). Within 24 months of enactment, the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior, in consultation with FERC and the affected industries, will identify corridors on federal lands that are needed or useful for oil and gas pipelines and electricity transmission within the 11 contiguous Western states. Corridors shall be identified in the remaining states within four years after the date of enactment. Designated corridors shall be incorporated into federal land-use plans.</p>		

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Provision	Current Law	House	Senate	Comments
<p><b>Electricity transmission line right-of-way in Cleveland National Forest, California.</b></p>	<p>The Secretary of the Interior and the Secretary of Agriculture are authorized to grant, issue, or renew rights-of-ways through public lands, in part, for the transmission of electricity. There is no time limit for review of applications (Federal Land Policy and Management Act, 43 U.S.C. 1761-1763).</p>	<p><i>Sec. 30902.</i> The Bureau of Land Management will become the lead federal agency for environmental and other necessary reviews for a high-voltage electricity transmission line right-of-way through the Trabuco Ranger District of the Cleveland National Forest in the State of California. All reviews are required to be completed within 1 year of enactment. All grants, easements, permits, plan amendments, and other approvals for the transmission line right-of-way must be issued within 60 days after completion of the environmental reviews. All rights-of-way applications that were received prior to December 31, 2002, have preference over applications and proposals received after that date.</p>	<p>No provision.</p>	
<p><b>Consultation regarding energy rights-of-way on public lands.</b></p>	<p>No current law.</p>	<p><i>Sec. 30903.</i> Within six months after enactment, the Secretaries of the Interior and Agriculture shall submit to Congress a Memorandum of Understanding to coordinate environmental compliance and processing of rights-of-way applications.</p>	<p>No provision.</p>	

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Provision	Current Law	House	Senate	Comments
<p><b>Enhancing energy efficiency in management of Federal lands.</b></p>	<p>No existing requirement.</p>	<p><i>Sec. 30904.</i> To the extent practicable, the Secretaries of the Interior, Commerce, and Agriculture are required to use energy-efficient technologies in public and administrative buildings associated with management of the National Park System, and other public lands. Further, to the extent practicable, the Secretaries are directed to use energy-efficient vehicles, including those with biodiesel or hybrid engine technologies.</p>	<p>No provision.</p>	
<p><b>Permitting of wind energy development projects on public lands.</b></p>	<p>No existing requirement.</p>	<p><i>Sec. 30905.</i> The Secretary of the Interior is required to permit wind energy testing facilities on federal lands, in accordance with BLM Instruction Memo 2003-20 (IM-20). Rent for wind energy development projects is limited to 50% of the maximum set out in IM-20 until capacity reaches 10,000 megawatts (MW) or 10 years has elapsed.</p>	<p>No provision.</p>	

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Provision	Current Law	House	Senate	Comments
<b>Sense of the Congress regarding generation capacity of electricity from renewable energy resources on public lands.</b>	No existing requirement.	<i>Sec. 30906.</i> Within the next 10 years, the Secretary of the Interior is encouraged to approve at least 10,000 MW of hydropower projects on public lands.	No provision.	
<b>Assessment of ocean thermal energy resources.</b>	No existing requirement.	<i>Sec. 30907.</i> Within one year, the Secretary of the Interior is directed to review assessments of ocean thermal energy resources, undertake new assessments if needed, and report on the resource potential and estimated costs for commercialization.	No provision.	
<b>Sense of the Congress regarding development of minerals under Padre Island National Seashore.</b>	In purchasing land for the Padre Island National Seashore, the Secretary of the Interior shall permit existing owners to retain mineral rights (Federal Enabling Act, 16 U.S.C. 459d).	<i>Sec. 30908.</i> In recognition of the split estate on Padre Island National Seashore, the federal government owns the surface rights while the mineral rights are held privately and by the state of Texas.	No provision.	
<b>Encouraging prohibition of off-shore drilling in the Great Lakes.</b>	No provision.	<i>Sec. 30909.</i> States and provinces adjacent to the Great Lakes are encouraged to prohibit off-shore drilling in the Great Lakes.	No provision.	

Provision	Current Law	House	Senate	Comments
<b>Regulatory reviews</b>	No existing requirement.	No provision.	<i>Sec. 1701.</i> Each federal agency is required to report every five years on regulatory changes needed to remove barriers to market entry for new energy-efficient technologies (such as fuel cells) and to market development for existing technologies.	
<b>Report on energy savings and water use</b>	No provision.	No provision.	<i>Sec. 1708.</i> DOE is required to report on cost-effective improvements to reduce energy use at municipal water and waste treatment facilities.	
<b>Report on research on hydrogen production and use</b>	No provision.	No provision.	<i>Sec. 1709.</i> DOE is directed to report on any projects at DOE nuclear facilities that involve hydrogen production and use in fuel cell development or involve other alternative energy production technologies.	

The energy tax titles (Sections 41001-44002 of the House bill and Sections 1900-2508 of the Senate bill) are not included in this report.

## Clean Coal

Provision	Current Law	House	Senate	Comments
<b>Authorization of appropriations.</b>	No specific provision.	<i>Sec. 50001.</i> Funding is authorized for FY2004-FY2012 for the Clean Coal Power Initiative.	<i>Sec. 1232.</i> DOE shall carry out projects to demonstrate the commercial application of advanced lignite and coal-based technology for power plants. Technical milestones and project criteria are established, and a study of coal technologies is required.	Although there is no current authorization, funding for this program is provided through the Interior and Related Agencies appropriation bill.
<b>Project criteria.</b>	No specific provision.	<i>Sec. 50002.</i> Technical criteria are established for coal-based gasification and other projects. The federal share of financing each clean coal project shall not exceed 50%.	See <i>Sec. 1232</i> (above).	
<b>Report.</b>	None.	<i>Sec. 50003.</i> A report on project status and technical milestones shall be submitted after the first year and every two years by the Secretary of Energy to various congressional committees.	See <i>Sec. 1232</i> .	
<b>Clean Coal Centers of Excellence.</b>	None.	<i>Sec. 50004.</i> The program shall include grants to universities to establish Centers of Excellence for Energy Systems of the Future.	No provision.	

## Hydrogen

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	The Spark M. Matsunaga Hydrogen Research Development, and Demonstration Act of 1990 (P.L. 101-566) authorizes hydrogen fuel research at the Department of Energy.	<i>Sec. 60001.</i> Various terms are defined.	<i>Sec. 1223 (a-b).</i> Short title and purposes are described.	Although authorizations under the law have expired, hydrogen fuel research and development is ongoing at the Department of Energy.
<b>Plan.</b>	Sec. 103 of P.L. 101-566 required the Secretary of Energy to prepare a comprehensive 5-year program management plan.	<i>Sec. 60002.</i> The Secretary of Energy is required to transmit to Congress a coordinated plan for hydrogen fuel research and development under this title.	<i>Sec. 1223 (c).</i> The Secretary of Energy is required to develop a coordinated plan and report to Congress biennially.	
<b>Program.</b>	Sec. 104 of P.L. 101-566 requires the Secretary of Energy to conduct a cooperative hydrogen research and development program. The federal government may provide no more than 50% of the cost of the research.	<i>Sec. 60003.</i> A program is established through the Department of Energy to address hydrogen fuel production, transmission, storage, and vehicle fueling, as well as advanced vehicle technologies, to complement hydrogen fuel development. Various program goals are defined, as well as requirements for grants and other funding under the program.	<i>Sec. 1223 (d).</i> Section 104 is amended so that the federal government may provide up to 75% of necessary funding. Further, if the Secretary of Energy deems appropriate, this limitation may be waived.	Funding authorizations under P.L. 101-566 have expired, but hydrogen fuel research is ongoing at the Department of Energy.

Provision	Current Law	House	Senate	Comments
<b>Demonstrations.</b>	Sec. 105 of the Act requires the Secretary of Energy to conduct demonstrations of critical technologies. The federal government may provide no more than 50% of the cost of the demonstration.	No similar provision.	<i>Sec. 1223(e).</i> If the Secretary deems that the technical risks are high enough, the 50% limitation may be waived.	
<b>Technology Transfer</b>	Sec. 106 of the Act established a program to transfer hydrogen technologies from the government to the private sector.	No similar provision.	<i>Sec. 1223(f).</i> The program is expanded to include technology transfer to foreign countries.	
<b>Interagency task force.</b>	Sec. 107 of the Act required the Secretary of Energy to consult with other agencies and coordinate federal hydrogen fuel research.	<i>Sec. 60004.</i> An interagency task force is established to promote the development of hydrogen fuel and vehicles.	<i>Sec. 1223(i)(2)(202).</i> An interagency task force is established to oversee integrated hydrogen and fuel cell research.	
<b>Advisory Committee.</b>	Sec. 108 of the Act established a Hydrogen Technical Advisory Panel to advise the Secretary of Energy on hydrogen research programs under the Act.	<i>Sec. 60005.</i> The Hydrogen Technical and Fuel Cell Advisory Committee is established to advise the Secretary on the above program.	<i>Sec. 1223(g).</i> The number of members on the panel is specified (currently the Secretary has authority to determine the makeup of the panel), and term limits are established.	
<b>External review.</b>	No provision.	<i>Sec. 60006.</i> The Secretary of Energy is required to contract with nongovernmental entities to review the plan under sec. 60002 and the program under sec. 60003.	No similar provision.	

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Provision	Current Law	House	Senate	Comments
<b>Miscellaneous provisions.</b>	No provision.	<i>Sec. 60007.</i> The Secretary of Energy is permitted to represent the United States with respect to hydrogen and fuel cell research and development.	No similar provision.	
<b>Authorization of appropriations.</b>	Authorizations expired after FY1998.	<i>Sec. 60008.</i> A total of \$1.8 billion is authorized for FY 2004 through FY2008.	<i>Sec. 1223(h).</i> A total of \$290 million is authorized for FY2003 through FY2006.	In the Senate bill, <i>Sec. 1223(i)</i> also authorizes a total of \$130 million for integrated hydrogen and fuel cell research.
<b>Integrated fuel cell and hydrogen research.</b>	The Hydrogen Future Act of 1996 (P.L. 104-271) directs the Secretary of Energy to integrate fuel cell and hydrogen research. It authorized a total of \$50 million for FY1997 and FY1998 for integrated research.	No similar provision.	<i>Sec. 1223(i).</i> The Act is amended to establish a cooperative integrated hydrogen and fuel cell research program overseen by an interagency task force. A total of \$130 million is authorized for FY2003 through FY2006.	
<b>Fuel cell program at National Parks.</b>	No provision.	<i>Sec. 60009.</i> A program is established to provide matching funds to assist in the deployment of fuel cells at national parks. A total of \$14 million is authorized for FY2004 through FY2010.	No similar provision.	

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Provision	Current Law	House	Senate	Comments
<b>Advanced power system technology incentive program.</b>	No provision.	<i>Sec. 60010.</i> A program is established to provide incentive payments to owners or operators of advanced power generation systems. Eligible systems include advanced fuel cell, turbine, or hybrid power systems. A total of \$70 million is authorized for FY2004 through FY2010.	No similar provision.	
<b>Fuel cell vehicle program.</b>	Various programs currently exist to promote the research, development, and demonstration of fuel cells and fuel cell vehicles.	No similar provision.	<i>Sec. 824.</i> The Secretary of Energy is required to develop a program to enable the availability of 100,000 hydrogen fuel cell vehicles by 2010, and 2.5 million vehicles by 2020. Further, the program should include timetables for the development of hydrogen fuel infrastructure to support those vehicles.	The development of a “Hydrogen Roadmap,” including timetables for the development of infrastructure has been a key component of the Department of Energy’s Hydrogen Program.

Provision	Current Law	House	Senate	Comments
<b>Historic Preservation Act and pipeline environmental review</b>	No provision.	No provision.	<i>Sec. 721</i> The Chairman of the Council on Environmental Quality (CEQ), in coordination with the Chairman of FERC, is to form an interagency task force that will develop an interagency memorandum of understanding to expedite pipeline projects. The task force is to consist of the lead agency chairs, and the heads of BLM, the Fish and Wildlife Service, Corps of Engineers, Forest Service, EPA, and the Advisory Council on Historic Preservation.	Among the perceived bottlenecks in the approval of new gas pipeline projects that the Bush Administration seeks to streamline is the environmental review process.  At issue regarding historic preservation is whether pipeline companies needing FERC approval to expand or renovate facilities should be compelled by FERC to fund and perform historical documentation and preservation.

## Housing

Provision	Current Law	House	Senate	Comments
<b>Capacity building for energy-efficient, affordable housing.</b>	No provisions for energy efficient housing are in the Housing and Urban Development (HUD) Demonstration Act (42 U.S.C. 9816).	<i>Sec. 70001.</i> Activities are required that provide energy efficient affordable housing and other residential measures under the HUD Demonstration Act.	<i>Sec. 931.</i> Activities are required that provide energy efficient affordable housing and other residential measures under the HUD Demonstration Act.	

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Provision	Current Law	House	Senate	Comments
<p><b>Increase of CDBG public services cap for energy conservation and efficiency activities.</b></p>	<p>Section 105(a)(8) of the Housing and Community Development Act of 1974 allows 15% of community development block grant (CDBG) public service funding to be used for energy efficiency.</p>	<p><i>Sec. 70002.</i> The amount of assistance for providing public services involving energy efficiency is increased from 15% to 25%.</p>	<p><i>Sec. 932.</i> Same.</p>	
<p><b>FHA mortgage insurance incentives for energy efficient housing.</b></p>	<p>Section 203(b)(2) of the National Housing Act allows solar energy equipment to increase the amount of property value that can be covered by mortgage insurance by up to 20%.</p>	<p><i>Sec. 70003.</i> The amount of property value that can be covered by mortgage insurance due to solar energy equipment is increased from 20% to 30%.</p>	<p><i>Sec. 933.</i> Same.</p>	
<p><b>Public Housing Capital Fund.</b></p>	<p>Section 9 of the United States Housing Act creates a Capital Fund available to public housing agencies to develop, finance, and modernize public housing developments and to make management improvements to these housing facilities. There is currently no provision for energy conservation projects that involve water-conserving plumbing fixtures and fittings.</p>	<p><i>Sec. 70004.</i> The Public Housing Capital Fund is modified to include certain energy and water use efficiency improvements.</p>	<p><i>Sec. 934.</i> Same.</p>	

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Provision	Current Law	House	Senate	Comments
<b>Grants for energy-conserving improvements for assisted housing.</b>	Section 2(a)(2) of the National Housing Act, as amended by Section 251(b)(1) of the National Energy Conservation Policy Act, empowers HUD to make grants for energy conservation projects in public housing, but it has no provision for energy- and water-conserving plumbing fixtures and fittings.	<i>Sec. 70005.</i> HUD is directed to provide grants for certain energy and water efficiency improvements to multifamily housing projects.	<i>Sec. 935.</i> Same.	
<b>North American Development Bank.</b>	No existing requirement.	<i>Sec. 70006.</i> The North American Development Bank is encouraged to finance energy efficiency projects.	<i>Sec. 936.</i> Same.	
<b>Capital fund</b>	No existing provision for proposed energy projects (42 U.S.C. 1437).	No similar provision.	<i>Sec. 937.</i> Activities of the Housing Act Capital Fund are expanded to include broader authorization for energy efficiency projects.	
<b>Energy-efficient appliances.</b>	No existing requirement.	<i>Sec. 70007.</i> Public housing agencies are required to purchase cost-effective Energy Star appliances.	<i>Sec. 938.</i> Same.	

Provision	Current Law	House	Senate	Comments
<b>Energy efficiency standards.</b>	The federal government encourages states to use energy efficiency standards for public and assisted housing, and Model Efficiency codes, that are set by the Council of American Building Officials (CABO) (42 U.S.C. 12709).	<i>Sec. 70008.</i> The energy efficiency standards and codes are changed from CABO to the 2000 International Energy Conservation Code.	<i>Sec. 939.</i> Same.	
<b>Energy strategy for HUD.</b>	No existing requirement.	<i>Sec. 70009.</i> The Secretary of Housing and Urban Development shall implement an energy conservation strategy for public and assisted housing.	<i>Sec. 940.</i> HUD is required to implement an energy efficiency strategy to reduce utility expenses in public and assisted housing. Also, HUD is directed to create an Office of Energy Management to implement the strategy and report on it to Congress.	

## National Climate Change Policy

### Sense of Congress

Provision	Current Law	House	Senate	Comments
<b>Sense of Congress on global warming.</b>	No provision.	No provision.	<i>Sec. 1001.</i> Growing evidence is found that increases in greenhouse gas concentrations are contributing to global climate change, and it is the Sense of the Congress that the United States should demonstrate international leadership and responsibility in mitigating the health, environmental, and economic threats posed by global warming, and assess the Federal Government's implementation of it.	

### Climate Change Strategy

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	No provision.	No provision.	<i>Sec. 1012.</i> Critical terms used in the title are defined, including "climate-friendly technology" and "stabilization of greenhouse gas concentrations."	No specific targets or time frames for greenhouse gas reduction are mentioned.

Provision	Current Law	House	Senate	Comments
<p><b>National climate change strategy.</b></p>	<p>Sec. 1602(a) of the 1992 Energy Policy Act states that “The ... National Energy Policy Plan ... shall include a ... strategy ... designed to achieve ... the stabilization and eventual reduction in the generation of greenhouse gases....”</p> <p>Article 4, 2(b) of the ratified. United Nations Framework Convention on Climate Change (UNFCCC) states: “Parties [developed countries] shall communicate ... information on its policies and measures ... with the aim of returning individually or jointly to their 1990 levels ... anthropogenic emissions of carbon dioxide and other greenhouse gases.”</p>	<p>No provision.</p>	<p><i>Sec. 1013.</i> The President, through a new Office of National Climate Change Policy (ONCCP) in the Executive Office of the President (EOP), is to develop a National Climate Change Strategy (NCCS) based on parameters identified in the Title. The ONCCP is directed to develop the NCCS with the long-term goal of stabilization of greenhouse gas concentrations. The NCCS is to encompass four key elements – (1) emissions mitigation measures; (2) technology innovation; (3) climate adaptation research; and (4) expanded efforts to resolve remaining scientific and economic uncertainty. The ONCCP is to develop the NCCS consistent with various national goals and with meaningful public and interest group participation. The NCCS is to be updated every four years, and progress reports are to be sent by the President to Congress annually. It is to be reviewed by the National Academy of Sciences.</p>	<p>This title sets up new institutions and institutional arrangements to study global climate change, its implications, and possible responses. It does not state that its goal is compliance with the UNFCCC commitment the U.S. made under article 4, 2(b) when it ratified the UNFCCC in 1992.</p>

Provision	Current Law	House	Senate	Comments
<b>Office of National Climate Change Policy.</b>	No provision.	No provision.	<p><i>Sec. 1014.</i> The ONCCP is established within the EOP. ONCCP is to focus on achieving the long-term goal of stabilizing greenhouse gas concentrations while minimizing adverse short-term and long-term economic and social effects. Duties including establishing priorities for the CCRS; establishing the Interagency Task Force; ensuring the objective nature of the CCRS; and advising the President on federal implementation of climate change activities. Among the duties of the Director are to advise the President on the multiple impacts of government programs, tax, trade, and foreign policies on achieving the CCRS, and to prepare an annual report for the President to submit to the Congress under Sec. 1013. The Interagency Task Force shall serve as the primary forum through which federal agencies assist the ONCCP in developing and updating the CCRS, and assist the Director of the ONCCP in preparing its annual report to Congress.</p>	New office established within the Executive Office of the President to coordinate climate change policy.

Provision	Current Law	House	Senate	Comments
<b>Office of Climate Change Technology.</b>	No provision.	No provision.	<i>Sec. 1015.</i> The Office of Climate Change Technology (OCCT) is established within DOE. Responsibilities include managing an energy technology R&D program that focuses on high-risk, breakthrough technologies that promise to mitigate and/or sequester emissions of greenhouse gases. In addition, OCCT is to support development of the NCCS and the activities of the Interagency Task Force through provision of staff, data, and analytical tools. The OCCT is to maintain core analytical capabilities and other expertise in support of the NCCS. It is required to submit to Congress and the ONCCP an annual report on its progress in meeting the goal of the energy technology research and development program. In addition, the OCCT is to design and manage an international carbon dioxide sequestration monitoring and data collection program. The object is to determine the appropriateness of various sequestration mechanisms.	Authorizes cost-sharing programs with the private sector.

Provision	Current Law	House	Senate	Comments
<b>Additional offices and activities.</b>	No specific provisions.	No provision.	<i>Sec. 1016.</i> Other federal agencies may establish appropriate offices as necessary to carry out the provisions of this Act.	

## Science and Technology Policy

Provision	Current Law	House	Senate	Comments
<b>Global climate change in the Office of Science and Technology Policy.</b>	No specific provisions.	No provision.	<i>Sec. 1021.</i> Section 101(b) of the National Science and Technology Policy, Organization, and Priorities Act of 1976 is amended to include under the Office of Science and Technology Policy (OSTP) the priority goal of “improving efforts to understand, assess, predict, mitigate and respond to global climate change.”	
<b>Director of Office of Science and Technology Policy functions.</b>	No specific provisions.	No provision.	<i>Sec. 1022.</i> OSTP is to advise the Director of ONCCP on science and technology matters as they relate to climate change.	

## Miscellaneous Provisions

Provision	Current Law	House	Senate	Comments
<b>Additional information for regulatory review.</b>	No specific provisions.	No provision.	<i>Sec. 1031.</i> Agencies are required to include in any Statement of Energy Effects pursuant to Executive Order 13211 an estimate of the net change in greenhouse gas emissions resulting from the proposed federal action, and which policies or measures will be undertaken to mitigate or offset the increased emissions.	
<b>Greenhouse gas emissions from federal facilities.</b>	No specific provisions.	No provision.	<i>Sec. 1032.</i> Four federal agencies are required to develop a methodology for estimating greenhouse gas emissions from all federally owned, leased, or operated facilities, including mobile sources. An emissions estimate is required within 18 months of enactment.	

## National Greenhouse Gas Database

Provision	Current Law	House	Senate	Comments
<b>Purpose.</b>	<p>A voluntary greenhouse reduction accounting system exists under <i>Sec. 1605(b)</i> of the 1992 Energy Policy Act.</p> <p>A mandatory greenhouse reporting system for powerplants is required under <i>Sec. 821</i> of the 1990 Clean Air Act Amendments.</p>	No provision.	<i>Sec. 1101.</i> Purpose is to establish a reliable and accurate greenhouse gas inventory, reductions registry, and information system.	
<b>Definitions.</b>	No specific provisions.	No provision.	<i>Sec. 1102.</i> Terms for Title XI are defined. Six gases are explicitly included in the definition of greenhouse gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Others may be added to the list.	

Provision	Current Law	House	Senate	Comments
<b>Establishment of memorandum of agreement.</b>	No specific provisions.	No provision.	<i>Sec. 1103.</i> Specifies duties for the Department of Energy, Department of Commerce, Environmental Protection Agency, and Department of Agriculture with respect to the database. The Director of ONCCP shall facilitate a memorandum of agreement among the agencies to develop and operate the database.	
<b>National Greenhouse Gas Database.</b>	No specific provisions.	No provision.	<i>Sec. 1104.</i> The National Greenhouse Gas Database is established to collect, verify, and analyze information on greenhouse gas emissions and reductions by entities in the United States. The comprehensive system is to maximize completeness while minimizing costs to participants. Reductions recorded may be applied to any future control program.	

Provision	Current Law	House	Senate	Comments
<b>Greenhouse gas reduction reporting.</b>	Voluntary greenhouse gas reductions are currently reported under Sec. 1605(b) of the 1992 Energy Policy Act.	No provision.	<i>Sec. 1105.</i> All participating entities must establish a baseline on an entity-wide basis (except for sequestration projects), and report annually to the appropriate agency their direct and indirect greenhouse gas emissions beginning the April 1 of the third calendar year after enactment. Entities may choose to report verified reductions achieved before the above date.	Reportable reductions include verifiable reductions reported under Sec. 1605(b) of EPACT.
<b>Measurement and verification.</b>	No specific provisions.	No provision.	<i>Sec. 1106.</i> The four designated agencies shall jointly develop comprehensive measurement and verification methods to ensure the registry is an accurate record of greenhouse gas emissions, reductions, sequestrations, and atmospheric concentrations.	
<b>Independent reviews.</b>	No specific provisions.	No provision.	<i>Sec. 1107.</i> Database efficacy and operation shall be reviewed by the General Accounting Office every three years. The scientific underpinning of the database shall be reviewed by the National Academy of Sciences every four years.	

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Provision	Current Law	House	Senate	Comments
<b>Review of participation.</b>	No specific provisions.	No provision.	<i>Sec. 1108.</i> Within five years of enactment, if participation in the registry involves less than 60% of aggregate greenhouse emissions, participation by all entities shall be mandatory.	
<b>Enforcement.</b>	No specific provisions.	No provision.	<i>Sec. 1109.</i> Failure of any participating entity to report emissions under section 1108 is subject to civil action in federal court and civil penalties of up to \$25,000 per day of non-compliance.	
<b>Report on statutory changes and harmonization.</b>	No specific provisions.	No provision.	<i>Sec. 1110.</i> The President shall submit to Congress within three years of enactment a report describing any necessary changes in law necessary to improve the accuracy or operation of the database or the Title.	
<b>Authorization of appropriations.</b>	No specific provisions.	No provision.	<i>Sec. 1111.</i> There are authorized to be appropriated such sums as necessary to carry out this Title.	

## Climate Change Science and Technology

### Department of Energy Programs

Provision	Current Law	House	Senate	Comments
<p><b>DOE global change science research.</b></p>	<p>No specific provisions.</p>	<p>No provision.</p>	<p><i>Sec. 1301.</i> DOE's Office of Science shall conduct a comprehensive research program to understand and address the effects of energy production and use on the global climate system. Activities shall include climate modeling and integrated assessment of climate change effects on economic and social systems. Over four years, authorized appropriations are \$755 million.</p>	
<p><b>Amendments to the Federal Nonnuclear Research and Development Act of 1974.</b></p>	<p>The Federal Nonnuclear Research and Development Act of 1974 (42 U.S.C. 5905) authorizes a comprehensive program of research, development and demonstration of nonnuclear energy resources to facilitate their commercialization.</p>	<p>No provision.</p>	<p><i>Sec. 1302.</i> The Federal Nonnuclear Research and Development Act of 1974 is amended to add development of greenhouse gas reduction, removal, and sequestration technologies to its purposes, along with pursuing a long-term climate technology strategy to demonstrate a variety of technologies by which stabilization of greenhouse gases might be best achieved.</p>	

## Department of Agriculture Programs

Provision	Current Law	House	Senate	Comments
<p><b>Carbon sequestration basic and applied research.</b></p>	<p>No specific provisions.</p>	<p>No provision.</p>	<p><i>Sec. 1311.</i> The Secretary of Agriculture is required to study the net sequestration of carbon by soils and plants, and study the net greenhouse gas emissions from agriculture, including the funding of basic research through competitive grants. Applied research, including competitive research grants, shall include sequestration methods and baseline methodologies, among other priorities. The Secretary may designate two research consortia to carry out required research with up to 25% of funding. Funding is authorized at \$25 million annually for four years.</p>	

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Provision	Current Law	House	Senate	Comments
<p><b>Carbon sequestration demonstration projects and outreach.</b></p>	<p>No specific provisions.</p>	<p>No provision.</p>	<p><i>Sec. 1312.</i> The Secretary of Agriculture is required to fund projects to demonstrate the ability to monitor and verify carbon sequestration, and to educate farmers and ranchers about the economic and environmental benefits of conservation practices that increase sequestration. Funding is authorized at \$10 million annually for four years.</p>	
<p><b>Carbon storage and sequestration accounting research.</b></p>	<p>No specific provisions.</p>	<p>No provision.</p>	<p><i>Sec. 1313.</i> The Secretary of Agriculture is required to fund research on carbon storage and sequestration accounting models and other tools that can assist landowners in quantifying carbon release, sequestration, and storage from various land practices. Five entities shall be competitively chosen for a pilot program to demonstrate and assess such tools in developing sequestration policies. Funding is authorized at \$20 million annually for five years.</p>	

## International Energy Technology Transfer

Provision	Current Law	House	Senate	Comments
<p><b>Clean energy technology exports program.</b></p>	<p>No provision.</p>	<p>No provision.</p>	<p><i>Sec. 1321.</i> An Interagency Working Group on Clean Energy Technology Exports is established to focus on opening and expanding energy markets and transferring clean energy technology overseas. Authorized activities include analyzing opportunities for international development, demonstration, and deployment of clean energy technology, investigating ways to improve technology transfer and technology exports to foreign countries, and making other assessments and recommendations with respect to the program's implementation. Annual reports on activities and expenditures are required.</p>	

Provision	Current Law	House	Senate	Comments
<b>International energy technology deployment program.</b>	No specific provisions.	No provision.	<i>Sec. 1322.</i> Section 1608 of the 1992 Energy Policy Act is amended to include an International Energy Technology Deployment Program. Projects deployed in foreign countries that are significantly more efficient than conventional technology in terms of greenhouse gases produced per unit of energy may be eligible for loans or loan guarantees under the program. Such projects would be cost-shared with the host country: 50% host country contribution in a developed county, 10% contribution in a developing country. Funding is authorized at \$100 million annually for nine years.	

## Climate Change Science and Information

### Amendments to the Global Change Research Act of 1990.

Provision	Current Law	House	Senate	Comments
<b>Amendments to the Global Change Research Act of 1990.</b>	1990 Global Change Research Program Act (P.L. 101-606) establishes the Global Climate Research Program aimed at understanding and responding to global change. (15 U.S.C. 2921 et. seq.)	No provision.	<i>Sec. 1331-1333.</i> Within the Global Change Research Program, the Committee on Earth and Environmental Sciences is renamed the Committee on Global Change Research, and committee membership is specified at the deputy secretary level. In addition, a subcommittee on global change research is established.	
<b>Change in National Global Change Research Plan.</b>	1990 Global Change Research Program Act establishes the Global Climate Research Program aimed at understanding and responding to global change. (15 U.S.C. 2934)	No provision.	<i>Sec. 1334.</i> The Chairman of the National Science and Technology Council is required to develop a 10-year strategic plan for the United States Global Climate Change Research Program and submit that plan to Congress within 180 days of enactment. A revised implementation plan would also be submitted.	

CRS-195

Provision	Current Law	House	Senate	Comments
<b>Integrated Program Office.</b>	No specific provisions.	No provision.	<i>Sec. 1335.</i> The Global Change Research Act of 1990 is amended to establish within the Office of Science and Technology Policy (OSTP) an Integrated Program Office to manage coordination and integration of global change research activities and budgets, along with identifying projects to fill research gaps.	
<b>Research grants.</b>	The National Science and Technology Council (NSTC) oversees the U.S. Global Change Research Program (15 U.S.C. 2935, EO 12881).	No provision.	<i>Sec. 1336.</i> The NSTC Committee on Global Change Research shall list priority areas for research and development on climate change that are not currently being addressed, and transmit that list to the National Science Foundation. Funding for NSF for priority areas is authorized at \$17 million annually.	

CRS-196

Provision	Current Law	House	Senate	Comments
<p><b>Evaluation of information.</b></p>	<p>NSTC has the authority to evaluate scientific uncertainty associated with global climate change (15 U.S.C. 2936).</p>	<p>No provision.</p>	<p><i>Sec. 1337.</i> NSTC authority is expanded to include assessment and evaluation of all uncertainties and policy implications associated with global climate change. Information generated is to be evaluated by considering its usefulness to local, state and national decision makers and other stakeholders.</p>	

**National Climate Services and Monitoring.**

Provision	Current Law	House	Senate	Comments
<p><b>Amendment of National Climate Program Act.</b></p> <p><b>Changes in findings.</b></p> <p><b>Tools for regional planning.</b></p> <p><b>Authorization of Appropriations.</b></p> <p><b>National Climate Service Plan.</b></p>	<p>The National Climate Program Act (15 U.S.C. 2901 <i>et seq.</i>) requires development of a national climate program to assist in understanding and responding to climate processes and their implications.</p>	<p>No provision.</p>	<p><i>Sec. 1341-1345.</i> The National Climate Program Act is amended to require the Secretary of Commerce to submit to congressional committees an action plan for a National Climate Service. The plan shall include recommendations and funding estimates for a national center for climate monitoring and predicting; a national coordinated modeling strategy; a program to ensure data quality and dissemination; and mechanisms to improve coordination within government and with the academic community.</p>	
<p><b>International Pacific research and cooperation.</b></p>	<p>No specific provision.</p>	<p>No provision.</p>	<p><i>Sec. 1346.</i> Funding for the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and the Pacific El Nino/Southern Oscillation (ENSO) Applications Center is provided to study climate variability in the Asia-Pacific area in cooperation with the countries in the region.</p>	

Provision	Current Law	House	Senate	Comments
<b>Reporting on trends.</b>	No provision.	No provision.	<i>Sec. 1347.</i> As part of the National Climate Service, the Secretary of Commerce is to establish a comprehensive atmospheric monitoring and verification program, and issue an annual report that identifies trends on local, regional, and national levels along with individual or multiple source emissions or reductions.	
<b>Arctic research and policy.</b>	15 U.S.C. 4102(d).	No provision.	<i>Sec. 1348.</i> The Arctic Research and Policy Act is amended to provide grants for arctic research and funds to the National Science Foundation (NSF) and federal agencies for arctic research.	
<b>Abrupt climate change research.</b>	No provision.	No provision.	<i>Sec. 1349.</i> Through NOAA, the Secretary of Commerce is to conduct research on potential abrupt climate change. Funding is authorized at \$10 million annually for six years.	

**Ocean and Coastal Observing System.**

<b>Provision</b>	<b>Current Law</b>	<b>House</b>	<b>Senate</b>	<b>Comments</b>
<b>Oceans and coastal observing system.</b>	Authorized under 10 U.S.C. 7902(a), the National Ocean Research Leadership Council prescribes policies and procedures to implement the National Oceanographic Partnership Program.	No provision.	<i>Sec. 1351.</i> Through the National Ocean Research Leadership Council, the President shall establish and maintain an integrated ocean and coastal observing system for understanding, improving, and protecting coastal and marine ecosystems and other purposes.	
<b>Authorization of appropriations.</b>	No provision.	No provision.	<i>Sec. 1352.</i> Funding is authorized for an observing system at \$1.385 billion over four years.	

**Climate Change Technology**

<b>Provision</b>	<b>Current Law</b>	<b>House</b>	<b>Senate</b>	<b>Comments</b>
<b>NIST greenhouse gas functions.</b>	Authorized under the National Institute of Standards and Technology Act (15 U.S.C. 272), the National Institute of Standards and Technology (NIST) conducts activities to enhance industrial competitiveness and is the lead laboratory for providing measurement and calibrations to underpin technological progress.	No provision.	<i>Sec. 1361.</i> The National Institute of Standards and Technology Act is amended to include research to develop enhanced measurements, calibrations, standards, and technologies to enable reduced production of greenhouse gases.	

CRS-200

Provision	Current Law	House	Senate	Comments
<p><b>Development of new measurement technologies.</b></p> <p><b>Enhanced environmental measurements and standards.</b></p>	<p>See above.</p>	<p>No provision.</p>	<p><i>Sec. 1362-1363.</i> The Secretary of Commerce shall initiate a program to develop innovative standards and technologies for calculating greenhouse gas emissions and reductions from various sources. The National Institute of Standards and Technology Act is amended to establish within the Institute a program to perform and support research on global climate change standards and processes, focused on providing knowledge applicable to reducing greenhouse gases. Activities include developing enhanced monitoring and modeling standards; assisting the development of a baseline for future greenhouse gas emissions trading, including international trading; and assisting in developing improved industrial processes designed to reduce or eliminate greenhouse gases. This effort shall include using the expertise of the National Measurement Laboratories of the National Institute of Standards and Technology.</p>	

CRS-201

Provision	Current Law	House	Senate	Comments
<b>Technology development and diffusion.</b>	See above.	No provision.	<i>Sec. 1364.</i> The Director of the National Institute of Standards and Technology may develop a program to support implementation of new “green” manufacturing technologies by the more than 380,000 small manufacturers.	
<b>Authorization of appropriations.</b>	No current authorization.	No provision.	<i>Sec. 1365.</i> Funding is authorized for NIST’s new global warming activities at \$10 million annually for five years.	

## Climate Adaptation and Hazards Prevention

### Assessment and Adaptation.

Provision	Current Law	House	Senate	Comments
<b>Regional Climate Assessment and Adaptation Program.</b>	New program.	No provision.	<i>Sec. 1371.</i> The President shall establish within the Department of Commerce a National Climate Change Vulnerability and Adaptation Program for regional impacts of global climate change. The program shall submit a report to Congress within 2 years on recommended mitigation strategies and programs. Funding is authorized at \$4.5 million.	

CRS-202

Provision	Current Law	House	Senate	Comments
<b>Coastal vulnerability and adaptation.</b>	No provision.	No provision.	<i>Sec. 1372.</i> The Secretary of Commerce shall conduct regional assessments of coastal vulnerability to climate change within two years of enactment, and submit to Congress regional adaptation plans to address those impacts within 3 years of enactment. Matching funds to assist coastal adaptation programs shall be provided based on the formula established in the Coastal Zone Management Act of 1972. A coastal response pilot program is also authorized. Funding for the regional assessments and grant program is authorized at \$3 million each, annually.	
<b>Barrow Arctic Research Center.</b>	New program.	No provision.	<i>Sec. 1373.</i> The Secretary of Commerce shall establish a Barrow Arctic Research Center to support interagency climate change and arctic research, authorized at \$35 million.	

## Forecasting and Planning Pilot Programs.

Provision	Current Law	House	Senate	Comments
<p><b>Remote sensing pilot projects.</b></p> <p><b>Database establishment.</b></p> <p><b>Definitions.</b></p>	New program.	No provision.	<p><i>Sec. 1381-1382, 1384.</i> The National Aeronautics and Space Administration (NASA) may establish a competitive grant program through NOAA's Coastal Services Center for pilot projects to explore the integrated use of remote sensing and other geospatial information to address governmental adaptation needs to forecast coastal zone and land use changes from global climate change.</p>	
<p><b>Air quality research, forecasts and warnings.</b></p> <p><b>Authorization of appropriations.</b></p>	No provision.	No provision.	<p><i>Sec. 1383, 1385.</i> NOAA is required to conduct regional studies and assessment of the effects of transported and transformed air pollutants. In addition, NOAA is to establish a program to provide regional air quality forecasts and warnings. Funding for the studies is authorized at \$3 million annually for four years, and funding for the warning system is authorized at \$5 million for FY2003 and such sums as necessary for subsequent years.</p>	

## Critical Energy Infrastructure

### Department of Energy Programs

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	None.	No provision.	<i>Sec. 1801.</i> Provides definitions used in the title.	
<b>Role of the Department of Energy.</b>	None.	No provision.	<i>Sec. 1802.</i> The Department of Energy Organization Act is amended to clarify that energy infrastructure security is part of DOE's mission.	
<b>Critical energy infrastructure programs.</b>	None.	No provision.	<i>Sec. 1803.</i> The Secretary of Energy is authorized to establish programs of financial, technical, and administrative assistance related to critical energy infrastructure security, consistent with overall national infrastructure security plans of the President.	
<b>Advisory committee on energy infrastructure security.</b>	None.	No provision.	<i>Sec. 1804.</i> A broad-based advisory committee is established to review DOE policy and activities to improve energy infrastructure security.	

CRS-205

Provision	Current Law	House	Senate	Comments
<b>Best practices and standards for energy infrastructure security.</b>	None.	No provision.	<i>Sec. 1805.</i> The Secretary of Energy is authorized to support private-sector efforts to develop best practices and standards for energy infrastructure security.	

**Department of the Interior Programs**

Provision	Current Law	House	Senate	Comments
<b>Outer Continental Shelf energy infrastructure security.</b>	Deepwater OCS activity is conducted under the Outer Continental Shelf of 1953 (43 U.S.C. 1331).	No provision.	<i>Sec. 1811.</i> The Secretary of the Interior shall establish an OCS Energy Infrastructure Security Program to provide funds to states to protect against threats to OCS facilities and related infrastructure.	

## Iraq Oil Import Restrictions

Provision	Current Law	House	Senate	Comments
<b>Iraq oil import restriction – title and findings.</b>	No provision.	No provision.	<i>Sec. 2601.</i> The Iraq Petroleum Import Restriction Act of 2002 finds that Iraq is in violation of U.N. Res. 687, regarding destruction of weapons of mass destruction, as well as U.N. Res. 661, regarding smuggled oil exports. Importing oil from Iraq is declared not consistent with U.S. foreign policy and national security interests.	Events may have made this provision superfluous. The recent regime change in Iraq and subsequent attempts to reestablish oil trade have resulted in a new State Oil Marketing Organization, which has awarded a number of supply contracts directly to oil companies, including several U.S. firms.
<b>Prohibition of Iraq oil imports.</b>	No provision.	No provision.	<i>Sec. 2602.</i> Direct or indirect oil imports from Iraq are banned.	
<b>Termination/ presidential certification.</b>	No provision.	No provision.	<i>Sec. 2603.</i> Imports from Iraq may resume upon presidential certification to Congress that Iraq is in compliance with U.N. Resolutions 687 & 986, that it has stopped compensating suicide bomber families, or that such imports are no longer contrary to U.S. interests.	
<b>Humanitarian interests.</b>	No provision.	No provision.	<i>Sec. 2604.</i> It is the sense of the Senate that the President should encourage public and private humanitarian aid so the Iraqi people will not be adversely impacted.	

Provision	Current Law	House	Senate	Comments
<b>Definitions.</b>	No provision.	No provision.	<i>Sec. 2605.</i> U.N. Resolutions 661 (oil exports and smuggling), 687 (weapons of mass destruction), and 986 (the oil-for-food program) are defined.	
<b>Effective date.</b>	No provision.	No provision.	<i>Sec. 2606.</i> The prohibition on Iraq oil imports starts 30 days after enactment.	

### Miscellaneous Provisions

Provision	Current Law	House	Senate	Comments
<b>Science and Technology Assessment Service.</b>	The Office of Technology Assessment was established in 1972 by P.L. 92-484 (2 U.S.C. 471 et seq.). Although still authorized, it has not been funded since FY1995 and no longer operates.	No similar provision.	<i>Sec. 1601.</i> A Science and Technology Assessment Service is established within the legislative branch to provide Congress with information on national issues in science and technology policy.	The service created by the Senate bill would be similar in some ways to the former Office of Technology Assessment, but with a modified structure and scope.
<b>Fair treatment of presidential judicial nominees.</b>	No provision.	No provision.	<i>Sec. 2701.</i> It is the sense of the Senate that the Senate Judiciary Committee should hold regular hearings on judicial nominees and expeditiously schedule hearings on nominees submitted May 9, 2001, and resubmitted September 5, 2001.	Of the 10 nominees described in the Senate provision, four were confirmed in the 107 <sup>th</sup> Congress and three more have been confirmed in the 108 <sup>th</sup> Congress. Of the three remaining, two have been reported from the Judiciary Committee and one has not.







CRS-211

House HR6	Title	FY 04	FY 05	FY 06	FY 07	FY 08	FY 04-08	FY 09-13	FY 04-13	Senate \$
Sec. 18001	Implementation and enforcement of fuel economy standards. <sup>2</sup>	5.0	5.0	5.0			15.0		15.0	NE
<b>Division B – SCIENCE <sup>3</sup></b>										
TITLE I – RESEARCH AND DEVELOPMENT										
Subtitle A – Energy Efficiency										
Sec. 21101	Authorization of appropriations for this subtitle. Total	616.0	695.0	772.0	865.0		2,948.0		2,948.0	1211
	Allocations:									
	<i>Lighting Systems (sec. 21111)</i>	50.0	50.0	50.0	50.0	50.0	250.0	200.0	450.0	1213
	<i>Electric Motor Control Technology (sec. 21122)</i>	2.0	2.0	2.0	2.0		8.0		8.0	
	<i>Secondary Electric Vehicle Battery Use Program (sec. 21132)</i>	4.0	7.0	7.0	7.0		25.0		25.0	
	<i>Energy Efficiency Science Initiative (sec. 21141)</i>	20.0	25.0	30.0	35.0		110.0		110.0	
Subtitle B – Distributed Energy and Electric Energy Systems										
Sec. 21201	Authorization of appropriations for this subtitle. Total	190.0	200.0	220.0	240.0		850.0		850.0	NE
	Allocation:									
	<i>Micro-cogeneration Energy Technology (sec. 21213)</i>	5.0	5.5	6.0	6.5		23.0		23.0	
Subtitle C – Renewable Energy										
Sec. 21301	Authorization of appropriations for this subtitle. Total	380.0	420.0	460.0	499.0		1,759.0		1,759.0	1221
	Allocations:									
	<i>Bioenergy (sec. 21311 &amp; sec. 21706)</i>	135.4	155.6	167.7	180.0		638.7		638.7	1222
	<i>Public Buildings (sec. 21322)</i>	30.0	30.0	30.0	30.0		120.0		120.0	
Subtitle D – Nuclear Energy										

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House HR6	Title	FY 04	FY 05	FY 06	FY 07	FY 08	FY 04-08	FY 09-13	FY 04-13	Senate §
Sec. 21401	Authorization of appropriations for this subtitle. Total	388.0	416.0	445.0	474.0		1,723.0		1,723.0	1241
	Allocations:									
	<i>Nuclear Infrastructure Support (sec. 21411(e))</i>	125.0	130.0	135.0	140.0		530.0		530.0	514
	<i>Advanced Fuel Recycling Program (sec. 21421)</i>	80.0	93.0	106.0	120.0		399.0		399.0	
	<i>University Programs (sec. 21431)</i>	35.2	44.4	49.2	55.0		183.7		183.7	
Subtitle E	– Fossil Energy									
Sec. 21501	(a) Total Authorization of appropriations for subtitle except (b).	530.0	556.0	583.0	611.0		2,280.0		2,280.0	
	Allocations:									
	<i>Fuel Cell Proton Exchange Membrane Tech (sec.21511(c)(2))</i>	28.0	28.0	28.0	28.0		112.0		112.0	1231
	<i>Coal Mining Technologies (sec. 21512)</i>	12.0	15.0				27.0		27.0	1233
	<i>Office of Arctic Energy (sec.21501(c)(3))</i>	25.0	25.0	25.0	25.0	25.0	125.0	75.0	200.0	NE
Sec. 21501	(b) Ultra-deepwater and Unconventional Resources <sup>4</sup>									
Subtitle F	– Science									
Sec. 21601	Authorization of appropriations for this subtitle. Total	3,785.0	4,153.0	4,618.0	5,310.0		17,866.0		17,866.0	1251
	Allocations:									
	<i>Fusion Energy Sciences except ITER &amp; FIRE</i>	276.0	300.0	340.0	350.0		1,266.0		1,266.0	
	<i>ITER participation (sec.21611) and FIRE plan (sec.21612)</i>	12.0	20.0	50.0	75.0		157.0		157.0	1254
	<i>Spallation Neutron Source- Construction</i>	124.6	79.8	41.1			245.5		245.5	
	<i>Spallation Neutron Source- Other</i>	103.3 <sup>5</sup>					103.3		103.3	
	<i>Nanotechnology Research and Development (sec.21633)</i>	265.0	292.0	322.0	355.0		1,234.0		1,234.0	1252
	<i>Science and Technology Scholarship Program (sec.21636)</i>	0.8	1.6	2.0	2.0		6.4		6.4	1501-2
	<i>Genomes to Life (sec.21641)</i>	100.0	ss	ss	ss		100.0		100.0	

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House HR6	Title	FY 04	FY 05	FY 06	FY 07	FY 08	FY 04-08	FY 09-13	FY 04-13	Senate \$
Sec. 21632	Precious metal catalysis research. <sup>6</sup>	SS	SS	SS			SS		SS	
Sec. 21634	Advanced scientific computing for energy missions.	SS	SS	SS	SS		SS		SS	1253
Subtitle G – Energy and Environment										
Sec. 21701.	Authorization of appropriations.									
	U. S.-Mexico energy technology cooperation. (sec. 21702)	5.0	6.0	6.0	6.0		23.0		23.0	1414
	Waste Reduction and Use of Alternatives (sec. 21703)	0.5					0.5		0.5	NE
Sec. 21707	Coal Technology Loan.	125.0					125.0		125.0	1237
Sec. 21708	Fuel cell test center.	0.5 <sup>b</sup>					0.5		0.5	NE
Sec. 21709	Fuel cell transit bus demonstration.	10.0	10.0	10.0	10.0		40.0		40.0	NE
Sec. 21801	Availability of funds									1402
TITLE III – CLEAN SCHOOL BUSES										
Sec. 23004	Authorization of appropriations									816
	(a) School Bus Grants	90.0	100.0	110.0			300.0		300.0	
	Allocation:									
	<i>Fuel cell bus development and demo. program (sec. 23002) <sup>a</sup></i>	25.0 <sup>b</sup>					25.0		25.0	
	(b) Diesel Retrofit Grants (sec. 23003)	SS	SS	SS	SS	SS	SS	SS	SS	
Division C – RESOURCES										
TITLE I – INDIAN ENERGY										
Sec. 30101	Indian energy.	SS	SS	SS	SS	SS	SS	SS	SS	NE
TITLE II – OIL AND GAS										

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House HR6	Title	FY 04	FY 05	FY 06	FY 07	FY 08	FY 04-08	FY 09-13	FY 04-13	Senate \$
Sec. 30211	Preservation of geological and geophysical data.	30.0	30.0	30.0	30.0	30.0	150.0		150.0	NE
<b>TITLE III</b>	<b>– BIOMASS ENERGY</b>									
Sec. 30301	Grants to improve forest biomass value.	50.0	50.0	50.0	50.0	50.0	250.0	250.0 <sup>7</sup>	500.0	NE
<b>TITLE IV</b>	<b>– ARCTIC COASTAL PLAIN DOMESTIC ENERGY</b>									
Sec. 30412	Local government impact aid & community service assistance.	5.0	5.0	5.0	5.0	5.0	25.0	25.0	50.0	NE
<b>TITLE VIII</b>	<b>– INSULAR AREAS ENERGY SECURITY</b>									
Sec. 30801	Insular areas energy security.	5.0	5.0	5.0	5.0	5.0	25.0	25.0	50.0	NE
<b>Division E</b>	<b>– CLEAN COAL</b>									
Sec. 50001	Clean Coal Power Initiative.	200.0	200.0	200.0	200.0	200.0	1,000.0	800.0	1,800.0	NE
<b>Division F</b>	<b>– HYDROGEN</b>									
Sec. 60008	Authorization of appropriations.	273.5	325.0	375.0	400.0	425.0	1,798.5		1,798.5	60008
Sec. 60009	Fuel Cell Program at National Parks.	2.0	2.0	2.0	2.0	2.0	10.0	4.0	14.0	NE
Sec. 60010	Advanced power system technology incentive program.	10.0	10.0	10.0	10.0	10.0	50.0	20.0	70.0	NE
	<b>Total Authorized Appropriations</b>	<b>13,858.4</b>	<b>11,749.7</b>	<b>12,597.7</b>	<b>9,062.7</b>	<b>1,071.7</b>	<b>47,470.2</b>	<b>1,234.0</b>	<b>48,704.2</b>	

Table Notes:

This table shows the authorizations of appropriations in H.R. 6, including loans but not loan guarantees.

ss. Such sums as may be necessary.

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- a. May not exceed amount specified.
- b. Lump sum. No fiscal year indicated.

### Endnotes:

1. SS for FY03 - FY23.
2. Funds go to the National Highway Traffic Safety Administration – Department of Transportation.
3. In most of Division B - Science - a single section number contains the total authorization for a title or subtitle as well as allocations of part of the total to one or more programs in that subtitle or title. The total amount is labeled as such with the allocations listed below in italics and enclosed in a box. The section number in parenthesis after the program title or description refers to where it is described in the bill.
4. Revenues are generated annually for this section from federal oil and gas leases. Revenues fluctuate year-to-year as a result of oil and gas prices and lease sales.
5. Funds available for FY03-FY06.
6. Directs that funds come from the amount authorized in section 21601.
7. Plus \$50 million for FY14.

**Table 3. Authorizations in H.R. 6 as passed by the Senate.**

ss = such sums as may be necessary

Senate	in millions	FY 02*	FY 03*	FY 04	FY 05	FY 06	FY 07	FY02-07	FY08-11	FY 02-11	House \$
<b>Division A</b>	<b>Reliable and Diverse Power Generation and Transmission</b>										
TITLE II	ELECTRICITY										
Subtitle B	Amendments to the Public Utility Holding Company Act										
Sec. 237	Authorization of appropriations.		ss					ss		ss	16055
Subtitle E	Renewable Energy and Rural Construction Grants										
Sec. 261	Renewable energy production incentive FY 03-23		ss	ss	ss	ss	ss	ss	ss	ss	16072
Sec. 264	Rural construction grants		20.0	20.0	20.0	20.0	20.0	100.0	40.0	140.0	NE
TITLE IV	INDIAN ENERGY										
Sec. 403	Comprehensive Indian Energy Programs	ss						ss		ss	NE
Sec. 407	Federal PMA power delivery studies		ss	ss				ss		ss	NE
Sec. 408	Feasibility study of wind & hydropower demonstration project	0.5						0.5		0.5	NE
TITLE V	NUCLEAR POWER										
Subtitle B	Miscellaneous Provisions										
Sec. 512	Thorium reimbursement	90.0	55.0	20.0	20.0	20.0	20.0	225.0		225.0	NE
Sec. 514	Nuclear Power 2010		ss					ss		ss	21411
Sec. 516	Decommissioning pilot program		16.0					16.0		16.0	NE

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Senate	in millions	FY 02*	FY 03*	FY 04	FY 05	FY 06	FY 07	FY02-07	FY08-11	FY 02-11	House §
Subtitle C	NRC Personnel Crisis										
Sec. 542	NRC training program		1.0	1.0	1.0	1.0		4.0		4.0	NE
	<b>Subtotal Division A</b>	<b>90.5</b>	<b>92.0</b>	<b>41.0</b>	<b>41.0</b>	<b>41.0</b>	<b>40.0</b>	<b>345.5</b>	<b>40.0</b>	<b>385.5</b>	
<b>Division B</b>	<b>Domestic Oil and Gas Production and Transportation</b>										
TITLE VI	OIL AND GAS PRODUCTION										
Sec. 601	Strategic Petroleum Reserve	ss						ss		ss	12103
Sec. 602	Federal onshore leasing programs for oil and gas		60.0	60.0	60.0	60.0		240.0		240.0	NE
Sec. 605	Orphaned and abandoned oil and gas well program		5.0	5.0	5.0			15.0		15.0	NE
Sec. 611	Authorization of Appropriations		ss					ss		ss	NE
TITLE VII	NATURAL GAS PIPELINES										
Subtitle C	Pipeline Safety										
Sec. 772	Authorization of Appropriations		64.0	64.0	64.0	6.0	6.0	204.0	0.0	204.0	NE
	<b>Subtotal Division B</b>	<b>ss</b>	<b>65.0</b>	<b>65.0</b>	<b>65.0</b>	<b>60.0</b>	<b>0.0</b>	<b>255.0</b>	<b>0.0</b>	<b>255.0</b>	
<b>Division C</b>	<b>Diversifying Energy Demand and Improving Efficiency</b>										
TITLE VIII	FUELS AND VEHICLES										
Subtitle A	CAFE Standards, Alternative Fuels & Advanced Technology										
Sec. 803	Maximum feasible average fuel economy	ss						ss		ss	NE
Sec. 816	Authorization of appropriations.		50.0	60.0	70.0	80.0		260.0		260.0	23004
Sec. 820B	Commercial by-products from municipal solid waste loan guarantee program	ss						ss		ss	17108





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Senate	in millions	FY 02*	FY 03*	FY 04	FY 05	FY 06	FY 07	FY02-07	FY08-11	FY 02-11	House §
	Matsunaga Hydrogen R&D and Demonstration program		65.0	70.0	75.0	80.0		290.0		290.0	
	Fuel Cells - Hydrogen Future Act		25.0	30.0	35.0	40.0		130.0		130.0	
	Subtotal, Renewable Energy		590.0	695.0	793.0	853.0		2,931.0		2,931.0	
Subtitle C	Fossil Energy										
Sec. 1231	Enhanced fossil energy research and development		485.0	508.0	532.0	558.0		2,083.0		2,083.0	21511
Sec. 1232	Power plant improvement initiative		0.2	0.2	0.2	0.2		0.8	1.0	1.8	NE
Sec. 1233	R&D for advanced safe and efficient coal mining technologies		12.0	15.0				27.0		27.0	21512
Sec. 1235	R&D for new natural gas transportation technologies										NE
Sec. 1236	Authorization of appropriations for Office of Arctic Energy		25.0	25.0	25.0	25.0	25.0	125.0	100.0	225.0	NE
Sec. 1237	Clean Coal Technology Loan		125.0					125.0		125.0	21707
	Subtotal, Fossil Energy		647.2	548.2	557.2	583.2	25.0	2,235.8	101.0	2,336.8	
Subtitle D	Nuclear Energy										
Sec. 1241	Enhanced nuclear energy research and development.										21401
	Core nuclear research, university nuclear science		100.0	110.0	120.0	130.0		460.0		460.0	
	Nuclear research capacity and infrastructure		200.0	202.0	207.0	212.0		821.0		821.0	
	Subtotal, Nuclear Energy		300.0	312.0	327.0	342.0		1,281.0		1,281.0	
Subtitle E	Fundamental Energy Science										
Sec. 1251	Enhanced programs in fundamental energy science.		3,785.0	4,153.0	4,586.0	5,000.0		17,524.0		17,524.0	21601
Sec. 1252	<i>Nanoscale science and engineering research.</i>		270.0	290.0	310.0	330.0		1,200.0		1,200.0	21633
Sec. 1253	<i>Advanced scientific computing for energy missions.</i>		285.0	300.0	310.0	320.0		1,215.0		1,215.0	21634
Sec. 1254	<i>Fusion energy sciences program and planning.</i>		335.0	349.0	362.0	377.0		1,423.0		1,423.0	21601





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Senate	in millions	FY 02*	FY 03*	FY 04	FY 05	FY 06	FY 07	FY02-07	FY08-11	FY 02-11	House §
Sec. 1402	Availability of funds. <sup>a</sup>										21801
Sec. 1408	Technology infrastructure program.		10.0	10.0				20.0		20.0	NE
Sec. 1414	United States - Mexico energy technology cooperation		5.0	6.0	6.0	6.0		23.0		23.0	21702
TITLE XV	PERSONNEL AND TRAINING <sup>a</sup>										
Sec. 1501	Workforce trends and traineeship grants.		ss	ss	ss	ss		ss		ss	21601
Sec. 1502	Postdoctoral & senior research fellowships in energy research.		ss	ss	ss	ss		ss		ss	21601
	<b>Subtotal Division E</b>	<b>105.5</b>	<b>6,709.2</b>	<b>7,275.7</b>	<b>7,847.7</b>	<b>8,526.2</b>	<b>228.0</b>	<b>30,567.3</b>	<b>803.0</b>	<b>31,370.3</b>	
<b>Division F</b>	<b>Technology Assessment and Studies</b>										
TITLE XVI	TECHNOLOGY ASSESSMENT										
Sec. 1601	National Science and Technology Assessment Service.		ss					ss		ss	NE
<b>DIVISION G</b>	<b>Energy Infrastructure Security</b>										
TITLE XIII	CRITICAL ENERGY INFRASTRUCTURE										
Subtitle B	Department of the Interior Programs										
Sec. 1811	Outer Continental Shelf energy infrastructure security.		450.0	450.0	450.0	450.0	450.0	2,250.0	450.0	2,700.0	NE
	<b>Total Authorized Appropriations</b>	<b>196.0</b>	<b>16,912.3</b>	<b>12,547.1</b>	<b>13,264.1</b>	<b>9,672.6</b>	<b>753.4</b>	<b>53,220.3</b>	<b>1,313.0</b>	<b>54,533.3</b>	

NOTES:

ss = such sums as may be necessary

NE = no equivalent provision

\*FY02 and FY03 columns include funds for other years when no year has been specified.

<sup>a</sup> Availability of Funds. Section 1402 says that appropriations authorized under certain titles shall remain available until expended. Those affected are titles XII (energy R&D), XIII (climate change R&D), and XV (traineeships and fellowships).

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