109th Congress Energy Bill Comparison Chart
Prepared by E&E Daily/Greenwire

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Note: The House passed its energy bill (**H.R. 6**) by a 249-183 vote on April 21, 2005. The Senate passed its energy bill (**S. 10**) by a 85-12 vote on June 28, 2005.

SECTION	HOUSE VERSION	SENATE VERSION
Arctic National Wildlife Refuge Drilling	• Authorizes oil and gas development on the 1.5 million acre coastal plain of the Arctic National Wildlife Refuge, restricts development footprint to 2,000 acres.	• No corresponding provision. Expects to deal with development of the Arctic National Wildlife Refuge through the budget reconciliation process.
CAFE	• Appropriates the same amount as the Senate -- $2 million per year for fiscal years 2006 to 2010 -- for NHTSA. • Directs NHTSA to set corporate average fuel economy standards, taking several factors into account, including technological feasibility, economic practicability, energy conservation and employment. • Also directs NHTSA to initiate a study on the feasibility on "reducing by model year 2014, by a significant percentage, the amount of fuel consumed by automobiles." Also, calls on the U.S. EPA to update its testing procedures for fuel economy ratings by taking into account "higher speed limits, faster acceleration rates, variations in temperature, use of air conditioning, shorter city test cycle lengths, current reference fuels, and the use of other fuel	• The bill appropriates $2 million for each fiscal year from 2006 to 2010 to the National Highway Traffic Safety Administration to "carry out its obligations with respect to average fuel economy standards." • The bill also directs NHTSA to conduct a study of the "feasibility and effects" of reducing the amount of gasoline used by automobiles by 2012. The study would examine the federal policy for establishing corporate average fuel economy (CAFE) standards as well as the impact that any change in policy would have on gasoline supplies, the U.S. auto industry, vehicle safety and air quality. • Contains language authorizing the president do take whatever actions neccessary to meet a 1 million barrel per day reduction from the amount projected for

	depleting features."	calendar year 2015 in the Energy Information Administration's Annual Energy Outlook 2005.
Clean Air Act	• Allows areas that do not meet EPA's current 8-hour ozone standard, as well as its old 1-hour requirement, to receive an extension of their compliance deadlines if they can show their primary emission problems come from an upwind industrial source. Nonattainment areas would receive an extended, flexible timeframe to comply with the EPA standards without facing a slate of existing, more costly requirements on their local industries. • Another provision smooths the way for the start-up of idled petroleum refineries by expediting the review and approval process for mothballed facilities, as well as speeds up permitting process for a new plant. The Energy secretary would be able to designate a "refinery revitalization zone" for accelerated review so long as it met two criteria. First, it must be in an area that has an idle refinery or experienced "mass layoffs at manufacturing facilities" as defined by the Labor Department. Second, the area must have an unemployment rate that exceeds the national average by at least 10 percent.	• Does not include either the ozone or refinery provisions.
Climate Change	• No provision.	• Establishes a climate change technology division at the

		Energy Department. Coordinates government's research and development, demonstration and deployment of technology to cut greenhouse gas related to economic growth. • Authorizes direct loans, loan guarantees and other subsidies for U.S. and international technologies. • Also adopted a "sense of the Senate" resolution that calls on Congress to enact mandatory limits on greenhouse gas emissions without significantly harming the U.S. economy, while engaging with U.S. trade partners who are key sources of greenhouse gases.
Coal Subsidies	• Provides $1.8 billion for the Clean Coal Power Initiative, with no less than 60 percent of the funding for coal gasification, and clarifies that the Energy secretary has the authority to provide up to 40 percent of funds to be used for other technologies other than gasification. • Provides federal loan guarantees for coal gasification and petroleum coke gasification projects. • Authorizes $3 billion on new coal power plants and pollution control technologies under the Clean Air Coal Program. • Provides for a 10-year program of research and development	• Provides $1.8 billion for the Clean Coal Power Initiative and dedicates at least 80 percent of the clean coal funds to gasification-based technologies, as opposed to other more traditional combustion methods that also receive federal research dollars, such as pulverized coal. • Includes extensive incentives title providing up to 80 percent loan guarantees to clean coal and other coal projects, including gasification investments estimated to be $3 billion. Congressional Budget Office estimates this would cost $350 million from 2006 through 2010. Authorizes $400 million for research and development technologies that use coal. Also authorizes a direct loan program

	aimed at developing carbon dioxide capture technologies for pulverized coal combustion units.	to upgrade a non-operational clean-coal plant in Alaska to a conventional coal-fired plant.
Diesel	• Contains no corresponding language concerning grants for diesel emissions reduction technology.	• The bill includes language calling for distribution of more than $1 billion over five years to establish voluntary national grant and loan programs for diesel emission reduction projects, mainly through retrofitting initiatives. The amendment is intended to help areas reach attainment with new air quality standards.
Electricity	• Establishes Electricity Reliability Organizations (EROs) that enforce reliability standards overseen by FERC and requires utilities and transmission grid operators to operate under those standards. • Grants FERC new transmission siting authority by allowing it to issue a permit for a facility if a state takes longer than 1 year to review the application, or if a state places certain conditions on the permit for approval, in areas deemed to be "essential" transmission corridors. • Allows federal power marketing agencies to join regional transmission organizations (RTOs) and prohibits any rulemaking on standard wholesale market design before 2006. • Allows vertically integrated, state-regulated utilities to	• Establishes Electricity Reliability Organizations (EROs) that enforce reliability standards overseen by FERC and requires utilities and transmission grid operators to operate under those standards. • Grants FERC new transmission siting authority by allowing it to issue a permit for a facility if a state takes longer than 1 year to review the application, or if a state places certain conditions on the permit for approval, in areas deemed to be "essential" transmission corridors. • Allows federal power marketing agencies to join regional transmission organizations (RTOs) and terminates FERC's standard wholesale power market design program. • Allows vertically integrated, state-regulated utilities to

	prioritize the use of their transmission lines to serve their customers. • Repeals Public Utility Holding Company Act. • Authorizes a DOE study on eliminating FERC's merger review authority, and hikes the price of the transactions FERC can review from $50,000 to $10 million. • Prohibits the filing of false information and round-trip trading and directs FERC to establish an electronic information system to collect limited amounts of information on electricity trading.	prioritize the use of their transmission lines to serve their customers. • Repeals the Public Utility Holding Company Act but grants FERC additional merger review authority over deals in which electric utilities take over gas utility companies and and where electric utilities purchase existing power plants. • Prohibits the filing of false information and round-trip trading and directs FERC to establish an electronic information system to collect limited amounts of information on electricity trading. • Allows federal regulators to address utility contracts tied up in the Enron bankruptcy case, raises penalties for violations of the Federal Power Act to $1 million and bans traders that violate the Federal Power Act from engaging in power trading activities and serving as officers or directors of electric utilities. • Establishes an Office of Consumer Advocacy within DOE to represent the interests of household consumers before the FERC. • Promotes "participant funding," which requires owners of power plants to pay the costs associated with hooking their facilities to the grid.
Ethanol/Renewable	• Would create an RFS standard	• Contains a renewable fuel

Fuels	of 5 billion gallons by 2012. Each gallon of either cellulosic biomass ethanol or waste derived ethanol will be counted as 1.5 gallon of renewable fuel toward RFS. If the cellulosic biomass ethanol is derived from agricultural residue or wood residue or is an agricultural byproduct it will be considered to be the equivalent of 2.5 gallons of renewable fuel. • The bill also includes a credit system aimed to ensure that areas without a sufficient ethanol infrastructure are not obliged to use it. • Continues to allow the use of gasoline additive methyl tertiary butyl ether (MTBE) in states that have not moved to ban the suspected carcinogen and groundwater contaminant. Contains a significant transition package for the MTBE industry, including the authorization of up to $250 million a year in grants from 2005 to 2012. Also continues to provide a safe harbor exemption for MTBE producers, helping them avoid costly defective product liability lawsuits. That exemption would also apply to ethanol producers.	standard (RFS) of 4 billion gallons in 2006 and 8 billion gallons by 2012. The bill language would also count each gallon of cellulosic ethanol as 2.5 gallons toward meeting the RFS and sets aside up to 250 million gallons of RFS demand for cellulosic ethanol beginning in 2013. • Exempts California from having to use ethanol during the summer.
Hydroelectric Provisions	• Allows dam owners to offer alternatives to environmental and fishway conditions imposed by the Interior Department and other agencies during the FERC relicensing process. The agencies would have to accept the alternatives offered by dam	• States, tribes and citizens can appeal and propose alternative environmental conditions during the FERC relicensing process. However, hydroelectric power dam owners can veto proposals by these stakeholders.

	owners if they provide for adequate resource protections and are either less costly or improve operation of the hydroelectric project. the agencies are not compelled to accept alternative conditions offered by other parties.	
Hydrogen	• Contains $4 billion for the development of hydrogen vehicles and infrastructure that will ensure availability of hydrogen fuel. Also, directs DOE to conduct programs in conjunction with the private sector to address hydrogen production, delivery, vehicle product and consumer understanding. Sets a goal of production of hybrid vehicles for the consumer market by 2015.	• Directs DOE to conduct research into how the federal government can support private sector efforts to develop hydrogen technology and requires additional public education and demonstration of hydrogen technology. Also, directs DOE to initiate or accelerate research into the development of hydrogen technology, including issues related to production, distribution of hydrogen fuel and its storage. All told, the bill allocates $3.8 billion of hydrogen research.
Liquefied Natural Gas	• Establishes FERC as the lead agency on siting and licensing of LNG import terminals but, in a nod to the states, requires FERC to consult with the states and allows state agencies to inspect the facilities for safety of operations.	• The bill has a specific section giving DOE broad authority to make loan guarantees to a variety of energy projects, ranging from renewable energy systems, to advanced nuclear energy facilities, integrated coal gasification combined-cycle technology, petroleum coke gasification technology, and carbon sequestration technology, as well as other new technologies. The legislation sets no limits on the number of projects, or total principal that could be guaranteed, nor does it indicate any priority for one type of project over another.

		• DOE cannot guarantee loans for more than 80 percent of a project's cost, and it could sell, manage, or hire contractors to take over a facility to recoup losses in the event of a default, or it could take over a loan and make payments on behalf of borrowers prior to a default. According to the Congressional Budget Office, such payments could result in DOE effectively providing a direct loan with as much as a 100 percent subsidy rate, essentially a grant, that could be used by the borrower to pay off its debts. • CBO assumes DOE would guarantee about $3 billion in coal gasification projects, which would include the two specified in the legislation and at least one other project. CBO also assumes DOE would provide loan guarantees for $625 million worth of renewable energy systems, such as biomass or geothermal electricity plants. And because of DOE's commitment to nuclear energy, it anticipates the department would guarantee at least one new nuclear facility over the 2011-2015 period, which could be for more than $2 billion at a subsidy of up to 30 percent.
Loan Guarantees	• The bill has no specific section giving loan guarantee authority. However, loan guarantees are embedded in the bill's clean power projects section on coal gasification, for a specific project integrated gasification	• Clarifies that FERC has authority over siting and licensing of LNG import terminals but notes that states retain their authority over permitting at the sites under the Clean Water Act, Coastal Zone

	combined cycle (IGCC) technology plant and five petroleum coke gasification projects. The bill also calls for loan guarantees for not more than 90 percent of the unpaid principal and interest due on any loan made to any Indian tribe for energy development.	Management Act and the federal Water Pollution Control Act.
Nuclear Policies	• Extends Price Anderson indemnification for 20 years. • Requires a report on feasibility of developing commercial reactors at Energy Department sites. Directs DOE to craft a plan for disposal facility for greater than Class C wastes. Eliminates requirement that NRC conduct antitrust review when reviewing reactor license applications. • Includes a host of nuclear power plant security provisions, including fingerprinting requirements for people with unescorted access to facilities; authorization of automatic weapons for security personnel regardless of state laws; expanded penalties for sabotage and attempted sabotage, new federal security study and corresponding enhancement of security standard if needed; and several others. • No nuclear production tax credit. • Provides $2.25 billion for nuclear R&D programs over five years. Separately, provides	• Extends Price Anderson indemnification for 20 years. Also includes nuclear power as a technology eligible under the bill's "incentives for innovative technologies" loan guarantee program that covers up to 80 percent of facility costs. • Sets project requirements for planned "Next Generation Nuclear Plant" to be constructed at the Idaho National Laboratory, including a call for technology selection for the hydrogen and electricity generating plant by Sept. 30, 2011, with construction to be completed 10 years later. Authorizes $1.25 billion for the project between fiscal years 2006 through 2015, while providing $1.18 billion over three years for core nuclear energy research programs, with additional funds for nuclear infrastructure support. • Directs DOE to craft a plan for disposal facility for greater than Class C wastes. • Provides a production tax credit for nuclear power from advanced reactors (see below).

	$750 million for Next Generation Nuclear Plant research, development and design, plus additional construction funds of up to $500 million for the project.	Does not include nuclear power plant security provisions, which are being handled through separate Senate legislation, although research title does call for R&D into technologies for deterring attacks.
OCS/Oil and Gas	• No offshore inventory provision. • Creates new $2 billion program -- drawn from "excess" federal royalties -- for researching ultra-deepwater and unconventional oil and gas research, development, demonstration and commercialization efforts. Other oil and gas research efforts are contained in the roughly $3 billion, five-year fossil energy research title. • Also contains coastal impact assistance for states with offshore production -- the first 10 years is $50 million per year, subject to appropriations, after that it shifts to direct funding equal to 25 percent of Outer Continental Shelf revenues. • Exempts oil and gas drill site construction from U.S. EPA Clean Water Act stormwater control mandates and excludes hydraulic fracturing from Safe Drinking Water Act requirements. Calls for faster and more coordinated federal efforts for energy permitting. • Limits NEPA review for several traditional energy activities on federal lands,	• Instructs the Interior Department to conduct an inventory of offshore oil and gas resources. Steers $1 billion over four years for coastal protection for states with current offshore oil and gas development, with Louisiana getting the largest amount. The money is not subject to annual appropriation. • Provides a host of production incentives, including royalty relief for natural gas production from deep wells in shallow water, sometimes called "deep shelf" projects. Also extends royalty relief for for deep water Gulf of Mexico oil and gas. Provides reduced royalties for marginal wells. • Includes the largely symbolic NOPEC act that would amend antitrust law to make oil cartels illegal and would not allow the sovereign immunity doctrine to prevent enforcement in U.S. courts. Also calls for reducing U.S. oil import dependence by one million barrels per day by 2015 but does not include an enforcement mechanism. • Authorizes $1.8 billion over three years in new fossil energy research and development funding that includes oil and gas

	including geophysical exploration that does not require road building. Prompts federal officials to repurchase oil, gas, coal and other leases in several circumstances under which exploration or development of the lease is not allowed. • Includes production incentives, such as deepwater and deep shelf royalty relief. Also includes royalty relief for onshore deep gas wells and gas hydrates. Instructs the Interior Department to write rules for a commercial oil shale leasing program by the end of 2006.	technologies. Provides an additional $165 million over five years for methane hydrates research and development. Calls for faster and more coordinated federal efforts for energy permitting.
Oil Savings	• No provisions.	• Directs the president to reduce America's oil dependence by 1 million barrels per day by 2015.
Refineries	• Includes the Refinery Revitalization Act, which eases regulations on refinery licensing in economically distressed areas. It would give the Energy Department the ability to establish "refinery revitalization zones" in areas with an unemployment rate 20 percent above the national average, as well as either a closed refinery or 50 or more layoffs in a major manufacturer.	• Contains language encouraging expansion of domestic refinery capacity by allowing refinery owners to depreciate refinery expenses when those expenses increase overall capacity by 5 percent or output capacity of certain qualified fuels by 25 percent.
Renewable Energy/Energy Efficiency	• No RPS and does not extend renewable energy tax incentives. • Calls for DOE to conduct assessment of domestic renewable energy resources; includes a "federal purchase requirement" that at least 7.5	• Includes a renewable portfolio standards requiring electric utilities to derive at least 10 percent of their electricity from renewable sources by 2020. Allows companies that cannot meet the standard to buy credits from utilities with excess

	percent of federal government energy purchases come from renewables from the year 2013 onward, with lower targets beginning in 2007; authorizes $50 million between fiscal years 2006 through 2010 for program to use photovoltaic systems in federal buildings. • Extends renewable energy production incentive program for public and nonprofit utilities to produce power from renewables. • Authorizes roughly $4 billion over five years for energy efficiency R&D for buildings, vehicles and industries. • Authorizes roughly $3 billion for renewable energy R&D over five years. • Includes a provision to limit National Environmental Policy Act review of renewable energy projects to the project as proposed and the no-action alternative. • Includes a host of appliance efficiency standards and rulemakings, and provisions to spur federal building efficiency and procurement of energy efficient products. Extends daylight savings time by two months. Other programs include funding to states for energy efficiency programs and energy efficiency appliance rebates.	renewable capacity. • Includes federal renewable purchase requirement akin to House bill. Extends renewable energy production incentive program for public and nonprofit utilities to produce power from renewables. • Renewable and energy efficient technologies are covered under the bill's "Incentives for Innovative Technologies" federal loan guarantee program. Extends renewable energy tax incentives (see below). • Authorizes $2.6 billion over three years for energy efficiency research and development. Authorizes nearly $2 billion over three years for renewable energy R&D programs. • Includes previsions for federal building efficiency and procurement of efficient products, as well as assistance to state efficiency programs akin to House measure. Sets new standards for a range of products and is more agressive than the House measure; the bill includes standards for products not in the House, bill including commercial refrigerators and freezers, large commercial air conditioners, and others.

Taxes	• The House energy bill calls for $8 billion in tax incentives, largely composed of extensions of incentives targeting oil and natural gas production, renewable energy, nuclear power and clean coal. Lawmakers stressed that it was little more than a place-holder for conference negotiations with the Senate. • "Improving Infrastructure" section: $6.15 billion. Treats natural gas gathering pipelines as seven-year property; treats natural gas distribution pipelines as 15-year property; treats new electricity transmission property as 15-year property; provide 60-month amortization of pollution control facilities for post-1975 coal plants; makes Section 29 a general business credit for fuel produced and sold through 2007; modifies special rules for nuclear decommissioning costs; exempts natural gas prepayments from bond arbitrage rules; and expands the definition of small refiner for oil depletion deduction. • Miscellaneous Incentives section: $1.85 billion. Reduces the fuel excise tax rate for water and diesel emulsions to reflect energy content; establishes a 15 percent credit for residential solar hot water and photovoltaics and credits for fuel cells, through 2007; requires a 15 percent credit for business and individual investments in fuel cells through 2007; amortizes delay rental	• Tax incentives package costs $12.6 billion over five years, including $1.99 billion in revenue offsets that pushed its total cost to below the Senate's five-year, $11 billion energy budget ceiling. The 10-year score for the tax package is $18.4 billion, with $4.37 billion in revenue offsets. • Electricity infrastructure: $3.1 billion over five years, $8.3 billion over 10 years. Includes provisions to extend and modify Section 45 credits for three years, provide for clean renewable energy bonds, provide treatment of certain income of electric cooperatives, allows for dispositions of transmission property to implement restructuring policies of the Federal Energy Regulatory Commission, provides investment incentives for production of electricity and gasification from advanced clean coal, and clean energy bonds for coal properties. Also includes credit for production from advanced nuclear power plants and a five-year carryback of net operating losses for certain electric utility companies, provided it does not exceed the company's investment in transmission property and pollution control facilities in the preceding taxable year. • Fossil fuel projects: $2.2 billion over five years, $2.7 billion over 10 years. Credit for investment in coke and

	payments over two years; amortizes geological and geophysical expenditures over two years; provides credits for advanced, lean-burn motor vehicle technology; and provides 20 percent credits for energy efficiency improvements to existing homes. • Alternative Minimum Tax: $82 million. Allows personal energy credits to be set against the AMT. It also would allow business energy credits against the AMT, including enhanced oil recovery credits for 2006 and 2007 and credits for marginal wells, low-sulfur diesel fuel credits and business installation of qualifying fuel cells.	cogeneration manufacturing facilities, that sunsets Dec. 31, 2009; enhanced oil recovery credit modification for new and expanded carbon dioxide recoveries that sunset Dec. 31, 2009; and gas distribution property treated as a 15-year property. Also includes incentives to expand refining capacity such as temporary expensing for equipment used in the refining of liquid fuels and pass-through of low sulfur diesel expensing and a cost-sharing program patterned after those the Alberta government in Canada provided for the oil industry to start producing in oil shale and tar sands properties. • Clean coal: The allocation increase for investment credits for "clean coal" facilities increases to 7,500 megawatts of power generation capacity, with 55 percent going to integrated gasification combined cycle technology and 45 percent to other advanced coal-based technologies. The provision also clarifies that lignite is a qualifying coal for clean coal facilities under the proposal. • Conservation and energy efficiency: $3.7 billion over five years, $3.8 billion over 10 years. Deductions for certain energy-efficient commercial building properties that sunset Dec. 31, 2009; business credit for construction of new energy efficient homes, with the 30 percent credit sunsetting at the end of 2007 and the 50 percent

		credit sunsetting at the end of 2009; incentives for certain energy efficient property used in business, with a sunset at the end of 2008, at $223 million. Credits for non-business energy properties that ends in 2008; energy credits for combined heat and power system properties that end in 2007; credit for energy efficient appliances that end in 2007 for dishwashers and 2010 for washers and refrigerators; a 30 percent credit for residential purchases and installations of solar photovoltaic and hot water systems and fuel cells that ends in 2009; and modifications to the investment tax credit for solar energy that end in 2009. • Alternative motor vehicles and fuels: $2.7 billion over five years, $2.5 billion over 10 years. The alternative motor vehicle credit ends in 2009 for hybrid vehicles, 2010 for alternative fuel vehicles and 2014 for fuel cell vehicles; modification and extension of credit for electric vehicles that ends in 2009; credit for installation of alternative fueling stations for property placed in services before 2020 and before 2015 for hydrogen property; credit for retail sale of an imposition of tax on alternative fuels; and extensions of the excise tax provision and income tax credit for biodiesel that ends in 2010. • Additional tax credits: $873 million over five years, $971 million over 10 years. Credit for

		underground natural gas storage, tax credit for energy research, small agri-biodiesel producer credit and expand eligibility for small ethanol producer credit; 15 percent tax credit for recycling equipment; special rule for utility NOLs; 15 percent credit for qualifying pollution control equipment at ethanol plants; tax incentives for coal production in Indian country; tax incentives for changeout of EPA non-compliant wood stoves; exemptions of bulk beds for farm crops from excise tax on heavy trucks; and a National Academy of Sciences study on health, environmental, security and infrastructure externalities associated with the use and production of energy.

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